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A

Digest of External Therapeutics

With Numerous Formulæ Arranged
for Reference.

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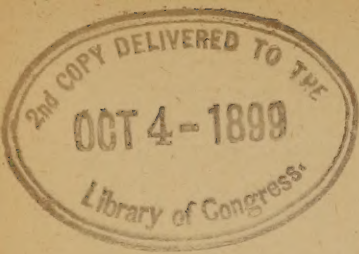
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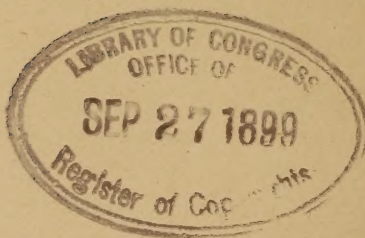


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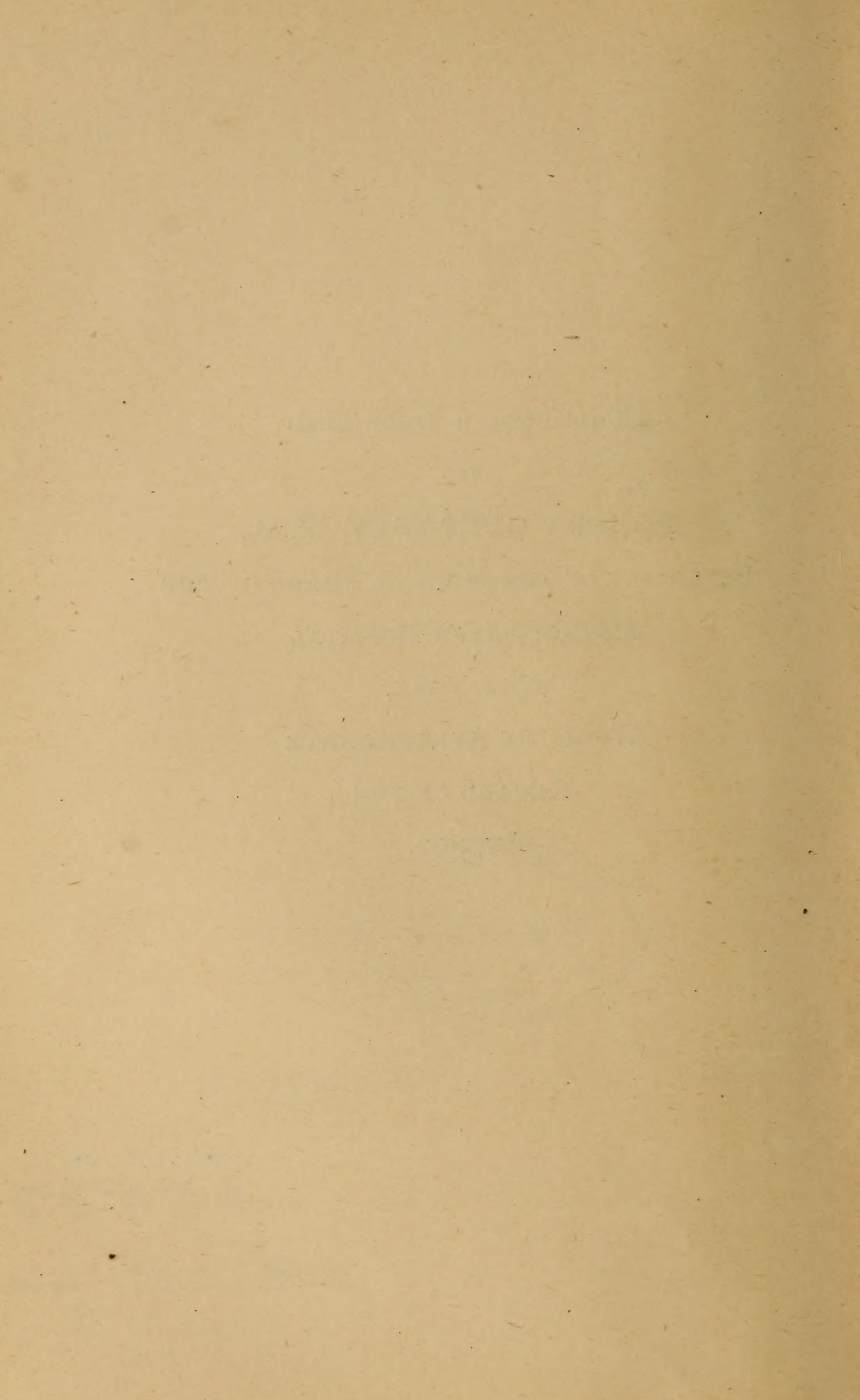
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THIS BOOK IS DEDICATED
TO
EGBERT GUERNSEY, M. D.,
PRESIDENT OF THE MEDICAL BOARD OF THE
METROPOLITAN HOSPITAL,
NEW YORK,
WITH THE AFFECTIONATE
REGARD OF THE
AUTHOR.



PREFACE.

It is not the purpose of this book to give undue prominence to external therapeutics, but to present the subject in a condensed and easily accessible form. No attempt has been made to cover completely so wide a field.

The remedies and remedial measures include those which are the more important and generally accepted, and have been selected from well known and recent writers. A wider range of authorities might have been presented, but it was found that after a certain number had been searched, while new names were added, new subject matter was not thereby obtained.

The following writers have been so frequently cited as authorities that the author desires to acknowledge his indebtedness to them: Goodno, Tyson, Anders, Pepper, Allbutt, Ruddock, and the Twentieth Century, Practice of Medicine; Foster, Barthelow, Ringer, Hare, Therapeutics; Harrison Allen, Local Therapeutics; Carleton, Bangs and Hardaway, Genito-Urinary Diseases; Van Harlingen, Kippax, Jackson, Crocker, Hardaway, Hyde, Shoemaker, Unna, Diseases of the Skin; Burt, Shoemaker, Materia Medica; Keating and Coe, Southwick, Cowperthwaite, and Dudley, Diseases of Women; Bosworth, Lennox Browne, Ivins, Ingalls, and Bishop, Diseases of Nose and Throat; Burnett, Boyle, McBride,

Bacon, Roosa, and Buck, Diseases of the Eye and Ear; Kelsey, the Allinghams, Andrews, and Gant, Diseases of the Rectum and Anus; Jacobi and Holt, Diseases of Children; Wyeth, Dennis, Park, Treves, Holmes, and Helmuth, Surgery; Treat's International Medical Annual for 1896, 1897 and 1898, and Sarjous' Annual.

E. G. R.

*226 Central Park South,
West Fifty-Ninth Street,
New York.*

Sept. 1, 1899.

NOTE.

The initials and abbreviations which appear at the end of paragraphs throughout this work are explained by the Reference Key on page 621.

Digest of External Therapeutics.

ABSCESS.

ACUTE ABSCESS:—

If seen early, suppuration may sometimes be prevented. The following are recommended with this end in view:

Rest and elevate the part; cleanse the surface with antiseptic soap and spray with a 2 per cent. solution of **Carbolic acid** or **Hydrogen Peroxide** for ten minutes every two hours, or apply compresses saturated in hot solutions of **corrosive sublimate** 1 to 4,000. If the lesion is situated on the lower extremity the same solutions may be employed in the form of baths. When pain is very severe the anode sponge of a galvanic battery, saturated in a 10 per cent. solution of **cocaine**, may be applied for five minutes every three hours, with a current not exceeding five milliamperes; during the intervals apply warm fomentations with borated or camphorated water or an infusion of poppies. (Sj.)

Menthol:—10 to 50 per cent. ethereal solutions painted on with a camel's hair brush two or three times a day control small abscesses. (Al.)

Carbolic Acid:—See carbuncles and boils.

Nitrate of Silver:—This drug is very highly praised by Mr. Higginbottom, the author of the method, who regards it as efficacious in subduing external in-

flammation: "The affected parts should be well washed with soap and water then with water alone to remove every particle of soap, as soap decomposes nitrate of silver, then wiped dry with a soft towel. The concentrated solution of nitrate of silver, 4 scruples to 4 drachms of distilled water, is then applied two or three times on the affected surface and beyond it on the healthy skin to the extent of two or three inches. The solution may be applied with a soft piece of linen on the end of a stick. In about twelve hours it will be seen whether it has been well applied. If any inflamed part is unaffected the solution must be immediately reapplied." (B.)

The following is recommended for phlegmonous inflammation; under its influence, together with moist heat, infiltration assumes a more kindly hue and pus is sometimes absorbed:

Ichthyol,	10 parts.
Resorcin,	5 parts.
Mercurial Ointment,	35 parts.
Lanolin,	50 parts. (Pk.)

Alum and Plumb. Acetate:—The following (formula of Von Bulow) is highly endorsed as effective for subduing local inflammation, it is non-poisonous, astringent, mildly antiseptic, and almost non-irritating:

Alumin.,	℥vi.
Plumb. Acetat.,	℥ix ss.
Aquæ,	Oij.

Filter and allow to stand twenty hours before using. (W. C.)

Cold:—In local inflammations is generally preferred to heat by patients; use ice bag or Leiter's coil. (W.)

Continuous Antiseptic Applications:—When the skin is broken, in place of poultices apply layers of gauze soaked in solutions of bichloride and cover with

rubber dressing. This will act somewhat as a poultice. (W. C.). A hot water bag may also be applied over the gauze.

Poultices:—Will sometimes abort, as well as hasten maturation; they are generally made of flaxseed meal, and should be applied only up to the time of suppuration, never after, or to open incisions. (W. C.)

Tr. Opii. or Tr. Bell.:—Poured over poultices useful to relieve pain.

If suppuration is unavoidable, incise as soon as presence of pus is ascertained. For anæsthesia of surface: Cocaine 5 per cent. solution, twenty drops subcutaneously near the abscess; spray of *Æthyl Chloride*, *Ether* or *Æthyl Bromide*; the latter especially valuable. (Sj.)

Incision:—The parts should first be thoroughly cleansed and rendered aseptic. The incision should be planned so as to run parallel with important structures, and of sufficient depth to freely expose the cavity; the opening should be made in as dependent a portion as possible to facilitate drainage. Abscess of the limbs should be opened longitudinally, in those of the anus and breast, the incisions should radiate from the part. Deeply seated abscesses and those near large vessels should be opened by Hilton's method; this consists of making an incision through the skin and deep fascia; a director is then pushed into the abscess cavity, the escape of pus showing when this is reached; a pair of closed dressing forceps is then inserted, and withdrawn with distended blades, thus enlarging the opening; a counter opening may be made if possible when the cavity is deep, and a drainage tube inserted. (Whar.)

After evacuation of pus, some surgeons irrigate the

cavity; others leave it to nature, packing with iodoform gauze for the first twenty-four hours; at the second dressing the cavity is irrigated. (W. C.)

The following solutions are used for irrigation:

Mercuric Bichloride:—1-4,000 or 5,000.

Carbolic acid:—1-40 or 50.

Hydrogen Peroxide:—1-8, or stronger.

Boric Acid:—Saturated solution.

Alumol:—1-5 or 10.

Dressing:—If the abscess cavity is small no drainage tube is necessary; a small piece of gauze should be placed between the edges of the incision to prevent adhesion. When the cavity is large a drainage tube or a substitute, such as a strip of iodoform gauze, should be introduced to the bottom of the cavity, and fastened with a safety pin at the surface. (Whar.) The dressing should consist of a strip of gauze soaked in a bichloride solution laid directly over the incision, over this, layers of cotton moistened with a bichloride solution, then dry gauze; over this in turn a piece of protective or oiled silk, and the whole held in place by a roller bandage. Some surgeons use plain sterilized cotton, but, in view of the discharge, the bichloride cotton is preferred by many. (W. C.) In exceptional cases an aseptic poultice, made of flaxseed meal, and a solution of bichloride of mercury, 1-5,000, may be applied. The frequency of changing the dressing will depend upon the amount of discharge. At each dressing the cavity may be irrigated, and the drainage tube shortened as required. (W.)

COLD ABSCESS:—

The majority of abscess of this variety are tubercular, though some may be syphilitic. Ordinary

tubercular abscesses contain pyogenic membrane, but the syphilitic do not. These abscesses should be opened with every antiseptic precaution. (A.)

Aspiration should generally be preferred, as evacuation by this method avoids shock and hæmorrhage; a large needle should be employed to prevent occlusion by masses of thickened lymph. After the removal of pus irrigate freely with a saturated solution of **Boric acid** or **Iodoform**. The puncture should be carefully sealed with iodoform gauze and collodion. (A.)

Another method is as follows: Withdraw the pus with an aspirator, then inject a 5 per cent. solution of **Carbolic acid**, afterwards aspirate, and renew the procedure until the solution comes out clear, then apply Lister's bandage with slight pressure. Four days later the same treatment; about five sittings are said to be required. **Iodoform** may be injected in the same way, but should not be renewed as long as the remedy is excreted in the urine (for formula see paragraph on this drug). **Boric acid**, 4 per cent. solution, may also be used in this manner. (Sj.)

Puncture:—This method of evacuating the contents of a cold abscess is often preferable to aspiration, from the fact that masses of lymph are liable to occlude the canula of the aspirator. The puncture is made with a bistoury; the opening enlarged with a director and antiseptic irrigations and dressings applied as mentioned. (Whar.)

Incision and Curetting:—Make a free incision and curette the cavity thoroughly with Volkmann's curette, then irrigate with **Carbolic acid**, 5 per cent. solution, insert a long drainage tube, and stitch up the wound close to it. (Sj.) This method is to be

considered when aspiration has failed; it is suited to abscesses with few ramifications, and those easily accessible to the curette. (A.)

Hyperdistension of the walls of an abscess cavity with an antiseptic fluid, after the removal of pus, was recommended by Mr. Callender. (A.)

Iodoform:—Formulæ for injection:

Iodoform,	10 parts.
Glycerine,	20 parts.
Mucil. Gum Acacia,	5 parts.
Carbolic Acid,	1 part.
Water, .	100 parts.

Inject 2 or 3 oz. at intervals of three or four weeks.

This is safe as far as iodoform poisoning is concerned. (A.) Billroth's formula:

Iodoform,	℥i.
Glycerine,	℥i.

A 5 per cent. ethereal solution is also recommended; it causes considerable pain; not more than three ounces should be injected. (A.)

Iodoform,	1 part.
Ether,	5 parts.
Distilled Water,	5 parts.

(Mosetig-Moorhof, Verneuil.)

Iodoform poisoning may be prevented by subjecting it and its excipient (omitting of course, the ether) to a temperature 212°. (Sj.)

Iodol:—As a substitute for iodoform has been recommended on account of the absence from odor but it is not as effective. (See Adenitis.)

Resorcin:—Cavities may be flushed with a 5 per cent. solution, and afterwards dressed with the powder. (Al.)

Iodine:—Solutions sometimes employed after free incisions, especially for scrofulous abscesses. (B.)

Phosphate of Lime:—Gauze soaked in a 5 per cent. solution for packing cavity. (Al.)

Potass. Permang.:— ʒi-Oj of water to correct fetor. (B.)

Oleate of Mercury, a 5 per cent. ointment with **Morphia** diminishes pain in indurations due to old abscesses, and prevents formation of new; to be smeared on, not rubbed in. (R.)

Naphthalene:—The following formula is recommended for injection: Naphthalene, ʒii ; alcohol, ʒii ; aq., ʒiv ; the water should be added hot and the whole filtered, since the crystals will clog the syringe; the solution must be warmed before using; after evacuation the cavity should be gently distended. (Al.)

Essence of Cloves:—10 per cent. in olive oil, injected into cavity. (F.)

For dressing, the substitutes for iodoform, as **Loretin**, **Europen**, **Boric acid**, **Methylene Blue**, etc.

ACNE SIMPLEX.

Local treatment is of great importance. In a limited number of cases when there is much heat, redness, and acute inflammation, mild washes and bland ointments, such as those for eczema of the face are indicated.

Bathing with hot water, and the use of medicated soaps, such as **Sulphur**, **Ichthyol**, **Bichloride of Mercury**, or **Salicylic acid**, should precede the use of all lotions and ointments. The soap should be used once daily, also plain hot water alone. This will often answer for mild cases with little irritation.

Boric Acid:—Saturated solutions in 96 per cent. alcohol, sopped on or applied with a compress, may be employed with advantage after the use of medicated soaps. (Vn.)

Hydrarg. Bichlorid.:—This is indicated when stronger remedies are required :

Hydrarg. Bichloridi,	grs. vi-xii.
Alcohol.,	℥i.
Aq. Destill.,	℥iv.

Dilute with water at first and gradually increase. The patient should be warned against possible irritating effects. (Vn.)

“Hebra’s Oriental Solution,” a popular remedy, is as follows :

Hydrarg. Bichloridi,	grs. viii.
Aq. Destill.,	℥iv.
Succi Limonis,	No. ii.
Albumin. ovi,	No. iv.
Sac. Alb.,	℥i.

The following is much used :

Hydrarg. Bichloridi,	grs. iv-viii.
Tr. Benzoin.,	℥ss-℥i.
Emul. Amygdal. Amar.,	ad, ℥iv.

“Gowland’s Lotion :”—One part each of **Hydrarg. bichloride**, and **Ammon. chloride**, and 200 of emulsion of **bitter almonds** ; this forms an excellent preparation. (Vn.)

Sulphur:—Serviceable in more severe cases, and one of the most effective remedies.

The addition of camphor is sometimes desirable ; the following makes a stimulating lotion :

Sulphur. Sublimat.,	℥ii.	
Tr. Camphor.,	℥i.	
Aq. Destill.,	℥iv.	(Ga.)

Another combination forming an ointment is:

Sulphur. præcipitat.,	℥i.
Pulv. Camphor.,	grs. xx.
Ung. aq. Rosæ,	
Petrolat.,	āā ℥iv.

Kummerfield's Lotion:—Forms an excellent wash in many forms of the disease; it is as follows:

Sulphur. præcipitat.,	℥ii-iv.	
Pulv. Camphor.,	gr. x-xx.	
Pulv. Tragacanth.,	℥i-ii.	
Aq. Calcis,		
Aq. Rosæ,	āā ℥ii.	(Al.)

Other useful formulæ are as follows:

Sulphuris,	℥i.	
Glycerini,	℥i.	
Alcoholis,	℥iv.	
Aq. Rosæ,	℥iv.	(Kp.)

Or

Sulphur. præcipitati,	℥i.	
Æther.,	℥v.	
Alcohol.,	℥iv.	(Vn.)

When the skin is very sluggish the following:

Potass. sulph.,	℥i.	
Tr. Benzoin.,	℥i.	
Glycerini,	℥iss.	
Aq. Rosæ,	ad ℥iv.	(Vn.)

Or

Potass. Sulphuret.,		
Zinc. Sulphat.,	āā ℥i.	
Aq. Rosæ,	℥iv.	

Dilute at first and gradually use stronger, not suited to irritable skins. (Sh.)

Vlemingckx's Solution:—(See Appendix II. for formula.) One of the best preparations for acne seborrhœca. Of this take one part, and ten of water and mix in a bottle; weaker solutions should be used on sensitive skins. Wash the face gently until a slight

burning sensation results, allow lotion to dry on and wash it off the next morning with soap and water; once or twice a week the mixture is made stronger. (B. H.)

Sulphur and Mercury should never be combined.

For the papular variety:

In mild cases lather the part with castile soap and hot water, and rub well with a towel. The lather may be mixed with fine sand or marble dust, or sand soap may be used.

When comedones are deeply seated and numerous, they should be squeezed out after lathering, using the thumb protected with a handkerchief or a comedone extractor. (B. H.)

Sapo Viridis:—After removal of comedones this may, in solution, be applied by means of a piece of coarse flannel, using the following formula:

Sapo. Virid.,	℥i.
Alcohol. fort.,	℥ii.
Aq. Destill.,	℥iii.
Spts. Lavandul,	℥ss.

Rub into the skin thoroughly and wash off the next morning. This may be continued until redness and scaling is produced when bland salves should be applied. When the inflammation has disappeared the green soap may be used again, if necessary, or if the larger comedones have disappeared, apply Vlem-
ingckx's solution. (B. H.)

Another method consists in rubbing on the green soap briskly for a few minutes, and then washing it off and powdering with starch or anointing with cold cream. (Vn.)

Ichthyol:—Recommended by Unna, who used an ichthyol soap for washing the parts night and morn-

ing then applied the following: Ammon. sulpho-ichthyolat., (grs. xii- z ii), Alcohol. 96 per cent., Æther., āā z iv. The application can remain on over night. If it is too irritating it should be removed after half an hour, and the following ointment applied: Acidi Boric., z ss, Acidi salicylic., grs. x, Ung. Zinci oxid., z i. It is advisable to begin with the weaker solutions of ichthyol. (Vn.)

Resorcin:—A good remedy; 15-20 per cent. paste.

Resorcini,	z i- z iss.
Zinc. Oxid.,	
Amyl.,	
Maydis,	āā z ii.
Ung. Aq. Rosæ,	z ss.
Ol. Olivæ, q. s.	

Apply at night at first for five minutes, then remove with a dry cloth; continue applying each night, lengthening the time until forty-five minutes have been reached. A good deal of redness and scaling may be produced, which should be treated in the same way as described in the use of green soap. (B. H.)

A milder preparation suited to less severe cases, when inflammation and congestion have partly subsided, is as follows:

Resorcini,	z i.	
Glycerini,	z i.	
Aq. Aurant. Flor.,	z vi.	
Spts. Vini Rect.,	z iii.	(Kp.)

Naphthol:—In severe cases the following paste may be applied: β -Naphtholi, z iiss, Sulphur. præcipit., z ss, Lanolini, Sapo.. Vir., āā z ii.

Allow to remain on fifteen to thirty minutes every night, then remove with cotton soaked in olive oil

and wash with soap and water. A severe inflammation and desquamation can be produced by this paste in a few days. As soon as irritation is severe, which may be after two or three applications, the remedy must be discontinued, and cold cream applied. (B. H.)

A milder preparation is as follows :

Naphtholi,	
Camphoræ,	
Resorcini,	ãã grs. viii.
Sulphuris,	grs. xlv.
Sapo. Viridis,	grs. xii.
Vaselini,	3v.

Allow to remain on over night. (Vn.)

In *acne indurata*, Shoemaker recommends the following line of treatment: All glandular and subcutaneous abscesses should be punctured, and the contents removed; a bistoury should be used, which must enter deeply. Ten to fourteen sittings will be necessary. The hæmorrhage which will be considerable may be controlled by cold compresses. Hæmorrhagic and flabby infiltrations should be scraped out with a sharp spoon, and fringes of skin removed with the scissors. At the end of ten to fourteen days when all large fluctuating nodules have been removed, and small ones only remain, the following is advised: (1) Mechanically express comedones and incise incipient abscesses; (2) Employ constant and vigorous washing with soap (toilet soap, soft soap, spts. sapo. kal., iodine, sulphur, naphthol, etc.), combined with vapor and douche baths; (3) Apply such remedies as will cause rapid exfoliation of the epidermis as well as of the lining cells of the sebaceous glands, thus relieving them of their contents and causing contraction; for this purpose employ the soaps just men-

tioned, together with sulphur and mercurial plasters and cold douches; (4) Protective ointments, lotions and powders. (Sh.)

Van Harlingen recommends that after opening larger suppurating lesions, the contents should be gently expressed and pure *Ichthyol* introduced into the cavity on a small probe or sharpened stick; he adds that too much pressure should be avoided in emptying the pustules as it is possible thereby to create new foci of suppuration.

Carbolic Acid:—5 per cent. solution, for application to the skin after removal of comedones. (B. H.)

Salicylic Acid:—1–3 per cent. solution in alcohol especially indicated for the pustular form. (B. H.)

A 50 per cent. plaster may be applied after opening pustules. (T. 96.)

Vlemingckx's Sol. Spts., Sapo. Kal., Resorcin, and Naphthol. may also be used with advantage in this variety of the disease. (B. H.)

Oleate of Mercury:—5 per cent., 3 drachms, olive oil 1 ounce, well mixed and applied at night is useful in obstinate cases. (Kp.)

Massage with a rubber ball was suggested by J. N. Hyde for indolent and intractable cases. The skin is first operated upon with a disinfected needle, and comedo extractor, until all pustules and sub-epidermic foci and prominent comedones are removed. The surface is then rendered aseptic by a solution of bichloride of mercury or formalin, 1–2 per cent., the latter preferred. The massage ball is then firmly applied, and by deep pressure other comedones are brought to view, and then removed. Lastly massage of the surface using the ball with salicylated cocoa oil or sulphur ointment. (T. 98.) For hast-

ening the disappearance of scales which follow severer types of the disease, massage is one of the best remedies; the following ointment is also highly recommended:

Hydrarg. Præcipit. Albæ,	℥i.
Bismuth. Subnit.,	℥iiss.
Ung. Glycerini,	℥x. (B. H.)

Eichhoff's Sulphur Camphor, or Balsam Peru Soaps may be used as an ordinary soap in mild cases, or well rubbed on in severe. (T. 96.)

Sea baths, Hygiene and Exercise are of great importance. (Ga.)

ACNE ROSACEA.

Sulphur, Resorcin, Naphthol, Green Soap, Salicylic acid and Ichthyol, as used in acne simplex, are applicable to this form of the disease, especially in the earlier stages; hyperæmia, small papules and pustules will usually disappear under this treatment. (B. H.)

In the first stage soothing remedies are indicated, viz:

Plumb. Carbonat.,	℥i.
Pulv. Marant.,	℥i.
Hydrarg. Ammoniat.,	grs. x.
Ung. Simplicis,	℥i.

Or

Plumb. Acetat.,	grs. v.
Zinc. Acetat.,	grs. x.
Aq. Rosæ,	℥iv.

Apply with a piece of old linen, for an hour or two, night and morning. (Sh.)

Hydrarg. Bichlorid.:—Gr. $\frac{1}{4}$ —ij, alcohol $\mathfrak{z}$ i, or an ointment. (Vn.)

In the second stage:

Hydrarg. Ammoniat.:—Gives good results; use 20–25 grains to Ung. Aq. Rosæ, 1 ounce. (Sh.)

Sulphur:—Will be found one of the best applications. Vlemingckx's solution (B. H.), or an ointment of 1–2 drachms to 1 ounce of Ung. Aq. Rosæ, may be used. Kummerfield's lotion (see acne) also forms an effective remedy; it may be applied from once to several times a day. If a sensation of drawing is caused the preceding ointment of sulphur may be applied in small quantities after using the lotion. (Vn.)

Ichthyol:—More effective here than in simple acne. It may be used in ointments, lotions, or salves, in the strength of 5–10 per cent., and in most cases is said to be all that is required. (B. H.) Unna recommends equal parts of Ammon. Sulpho-ichthyolate, Distilled Water and Glycerine.

Ergot.:—Forms an effective application, viz:

Ol. Ergot.,	
Glycerini,	āā $\mathfrak{z}$ ss.
Ext. Belladonnæ,	$\mathfrak{z}$ i. (Sh.)

Or,

Ex. Ergotæ,	$\mathfrak{z}$ ss.
Cocain. Hydrochlorat.,	grs. v.
Plumb. Carbonat.,	$\mathfrak{z}$ ss. (Sm.)

Iodine:—Kaposi recommends the following for application eight to twelve times daily for three or four days, the part to be immediately covered with gutta percha (B. H.):

Iodi Pur.,	
Potass. Iodid.,	āā $\mathfrak{z}$ i.
Glycerini,	$\mathfrak{z}$ ii.

Among other remedies used are:

Mercuric and Salicylic acid Plasters and Chrysarobin 3 per cent. in liquid gutta percha. (B. H.)

Poultices:—Sometimes when other means have failed hot fomentations, followed by soothing applications, such as oleate of bismuth are beneficial. (Sh.)

Puncture of the Skin with fine needles or a knife followed by sponging in hot water will relieve the congestion in chronic stages of the disease. This procedure may be repeated at intervals of five to seven days. After each operation bland astringent applications should be made. (Sh.)

Scarification:—When the dilated blood vessels are very prominent, and the tissues hypertrophied, linear scarification may be performed, using a small bistoury or a Vidal's scarifier. A large number of sittings are frequently necessary. Local anæsthesia may be produced by freezing. The bleeding after operating may be controlled by cold compresses. Scarification is advised as promising a greater degree of success than any other method. (Vn.)

Electrolysis:—Recommended by Hardaway under conditions which indicate scarification, using a fine needle attached to the positive pole while the patient grasps the negative. Better results, however, are obtained from the positive pole. A few sittings will cause shrinkage of the vessels. A mild current is used, and the pain is trifling. Scars rarely result. (B. H.)

ADENITIS.

Iodine:—The tincture, painted on, is a useful and often effective remedy. (F.)

Belladonna:—The officinal ointment alone, or com-

bined with officinal iodine ointment, equal parts, or with equal parts of iodide of lead ointment. Combination appears to increase its efficacy. (Al.)

Cadmium Iodide:—May be substituted for iodine, using 1 drachm—1 ounce of lanolin; it does not stain the skin but is not so effective. (Al.)

Lead Iodide:—The officinal ointment rubbed in twice daily, in non-suppurating forms, does not produce so much cutaneous irritation as other iodine preparations. (Al.)

Iodoform Injection into cavity of gland, as recommended in abscess. (See that subject).

Iodol:—A substitute for iodoform, non-odorous, but less effective, has given good results in suppurating adenitis. After scraping, it may be employed in the form of powder or solution. Mazzoni's formula for the latter is Iodol, 1 part; Alcohol, 14 parts; Glycerine, 32 parts. (Al.)

Ichthyol:—10–60 per cent. applications give good results and relieve pain. (F.)

Essence of Cloves:—10 per cent. solution in olive oil, from 30–300 drops injected once a week, the frequency of injection depending upon the rapidity with which the oil is absorbed, has benefited tuberculous glands. (F.)

Mercurial Ointment:—For local indurations and enlargements, especially those of bubo and of lymphatic glands. It is usually applied by inunction, the compound ointment containing camphor, which is thought to promote the absorption of mercury, may be preferred. (F.)

Mercurial Plaster:—Applied over enlarged glands for its resolvent action. (F.)

Phytolacca Decandra:—The solid extract spread on

cloth is used to prevent the formation of pus. (F.)

Naphthalene:—Has been advised as a substitute for iodoform. (See abscess.)

Teucrium Scordium:—An aqueous extract called Teucrin is furnished in hermetically sealed tubes, each containing 45 grains for use by injection. This is injected around the tubercular gland, the contents of the tube being used. The remedy will set up an inflammatory action around the gland, and bring about the expulsion of the tubercular deposit. It has been used extensively by Prof. Von Moisteg-Moorhof. (F.)

Carious Teeth:—In children have been found to be a medium by which tubercular bacilli can gain an entrance and affect the cervical and submaxillary glands; from this it follows that such teeth should be extracted or filled. (T. 98.)

For suppurating adenitis. (See abscess.)

AGALACTIA.

Castor Oil:—A strong decoction of the leaves applied by means of a soft cloth often proves successful. (T. 97.) **Irritation of Gland:**—Draw out the milk with pump. **Hot Applications:**—Decoction of Marsh Mallow or Broom. (Bt.)

ALOPECIA.

Local stimulation constitutes the general plan of treatment. If the scalp is dry the application should be made up with oil; if greasy, with alcohol.

Spts. Sapo. Vir.:—(Sapo. vir. ziv —alcohol. zii) May

be used once or twice a week for shampooing; this removes accumulations of sebum and scales, and stimulates the scalp; after its use, thoroughly dry the scalp and apply the following:

Acid. Carbolic.,	grs. xv.
Glycerini,	℥ii.
Aq. Cogn.,	ad ℥i.

This may be applied by means of a comb and Barnes' dropper, rubbing in well with a soft brush. Go over the scalp in a line carefully to avoid making a mess which such application will do if rubbed in carelessly. (Vn.)

Pilocarpine:—This drug seems to have an action in promoting growth of the hair. The following preparations are recommended:

Pilocarpin. Nitrat.,	grs. ii.
Quiniæ Hydrochlor.,	grs. viii.
Glycerin.,	℥ii.
Aq. Rosæ,	℥vi. (M. W.)

Lassar's ointment, grs. xv-℥i (T. 97); or made up as follows:

Pilocarpin. hydrochlor.	℥ss.
Vaselini,	℥v.
Lanolini,	℥ii.
Ol. Lavandulæ,	gtts. xxv. (Ja.)

Cantharides:—This remedy enters largely into the formation of "hair tonics," though it is claimed that their effect is not increased by its presence. (F.) It is none the less mentioned by most dermatologists and is usually applied in the proportion of 1-3 drachms to the ounce.

Acetic Acid:—Has some influence; it may be used in Cottle's formula:

Acid. Acetici,	℥ss.
Pulv. Borici,	℥i.
Glycerini,	℥iii.
Spts. Vin. Rect.,	℥ss.
Aq. Rosæ,	ad ℥viii. (B. H.)

Quinine:—Largely used. Its influence is probably that of a local stimulant. Bulkley recommends:

Quin. Sulph.,	℞i.
Zinc. Sulphat.,	grs. x.
Tr. Cantharidis,	℥iii.
Alcohol. (absolute),	
Glycerini,	āā ℥iv.
Spts. Myrciæ,	ad ℥vi. (Al.)

Another formula (Gerhard's) is the following:

Quin. Sulph.,	℥ss.
Tr. Cantharidis,	℥i.
Spts. Ammon. Aromat.,	℥i.
Ol. Rosmarini,	gtts. v.
Ol. Ricini,	℥iss.
Spts. Myrciæ,	℥vss.

Apply with a stiff brush two or three times a day. (Sn.)

Liq. Ammonia:—(Pure or diluted.) The following was a favorite of Wilson:

Ol. Amygdalæ,	
Liq. Ammonia,	āā ℥i.
Spts. Rosmarini,	āā
Aq. Mellis,	℥iii. (Wa.)

Medicated Soaps:—Eichhoff's Salicylic Acid, Sulphur, Resorcin and Tar, useful for shampooing. (Vn.)

Resorcin:—When there is much scaliness first wash with tar soap, and apply a solution of 30-60 grains to 13 ounces of spts. myrcia. Lassar recommends the following method: First wash the scalp with tar soap, then rub in well a 2 per cent. solution of Corrosive Sublimate; this is followed by the

application of **Naphthol** 1–3 per cent. in alcohol, to dry the hair, the scalp is finally anointed with a 2 per cent. solution of **Salicylic Acid** in olive oil. (Vn.)

For use after fevers, the following:

Sodii Biborat.,	grs. xxiv.	
Acidi, Salicylic.,	grs. viii.	
Tr. Cantharidis, .	ʒii.	
Spts. Myrciæ,		
Aq. Rosæ,	āā ʒi.	
Aq. Bullientis,	ad ʒiv.	(Vn.)

Sulphur:—1drachm to the ounce in cold cream, alcohol or vaseline, constitutes one of the best remedies when pityriasis or seborrhœa sicca is the cause. (B. H.)

Tr. Capsici, ʒi–iij to ʒi; **Chloral**, ʒ–ʒi; **Tr. Nuxvom.**, ʒ–ʒi; **Hydrarg. Bichlor.**, 1 to 500, are other stimulants in use. (B. H.)

Many cases do better under an antiparasitic treatment. **Antiparasitic Soaps** should also be considered. (Pf.)

Borax:—Is useful for cleansing, but its continuous employment is injurious. (Ja.)

Yolk of Egg beaten up in lime water forms an excellent shampoo. Brushing the hair vigorously in reverse direction to that in which it lies is beneficial. (Rd.)

ALOPECIA AREATA.

Treatment is regarded by some dermatologists as ineffectual, either for restoring the growth of hair or for preventing the formation of new patches (Kaposi); many writers, on the other hand, while not claiming much, advise the persistent employment

of remedies. Local treatment should be directed toward stimulation of the skin. Before application, the scalp should be well washed with Castile soap or with spirits of green soap. (Vn.)

Some of the numerous remedies are as follows:

Chrysarobin:—3–12 per cent. ointment (caution about getting any into the eyes). (B. H.) **Oleate of Mercury:**—2–10 per cent. **Iodine:**—The tincture painted on patches, has been followed by growth of hair; a 33 $\frac{1}{3}$ per cent. solution in collodion is also used. (Ja.)

Capsicum and Cantharides:—The following is a useful combination:

Tr. Cantharidis,	
Tr. Capsici,	āā ʒss.
Ol. Ricini,	ʒss.
Aq. Cogn.,	ʒi. (Vn.)

A formula of Tilbury Fox, which Van Harlingen says he has used with satisfaction, is:

Tr. Nucis Vom.,	ʒss.
Tr. Cantharidis,	ʒvi.
Glycerini,	ʒii.
Aq. Destill.,	ʒiss.
Aq. Rosæ,	ʒiii.

Carbolic Acid:—A 95 per cent. solution brushed lightly with a swab over the affected part and then rubbed in is highly recommended by Bulkley.

Hydrarg. Bichlorid.:—This remedy enters into the formation of many lotions; it may be used in solution of 2–3 grains to the ounce, or in combination with other drugs. It forms one of the principal ingredients in the method recommended by Raymond who promised to restore the hair in sixty days by adopting the following: The surface of the de-

nuded patch is first washed with carbolic soap, and the periphery shaved. This should be done twice a week; then every morning the following wash is rubbed in with a paint brush for one or two minutes:

Hydrarg. bichloridi,	gr. viss.
Tr. Cantharidis,	℥vi.
Bal. Fioravanti,	℥iss.
Aq. Cologniensis,	℥v.

At night the following solution is to be used in the same way:

Acid. Salicylici,	℥ss.
Naphtholi,	℥iiss.
Acid. Acetici (crystal,)	℥ss.
Ol. Ricini,	℥iiiiss. (B. H.)

Subcutaneous administration of the bichloride has been successfully employed by Moty; he used a 4 per cent. solution in water, with 2 per cent. of cocaine added. Of this a single injection of one drop was made in a medium sized patch, and from four to five about a large patch, and at its periphery. There should be intervals of four days between the injections. A cure is said to be expected after the fourth series of injections. (Ja.)

Pilocarpine:—Ointment grs. xv—℥i.

Acetic Acid:—Painted on the spots until they whiten, then sponge with cold water; repeat three or four times a day. (Ja.)

The following was recommended by Sir Erasmus Wilson:

Ol. Amygdalæ Dulcis,	
Liq. Ammoniaë Fort.,	āā ℥ss.
Ol. Limonis,	℥ss.
Spts. Rosmarini,	ad ℥iv.

Also the following applied with friction :

Tr. Aconiti Rad.,	℥iv.	
Chloroformi,	℥ii.	
Liq. Ammoniaë,	℥i.	
Pulv. Camphoræ,	℥i.	
Ol. Olivæ,	ad ℥ii.	(Vn.)

Cantharidal Collodion:—Blisters are sometimes used with success, and are mentioned by many dermatologists. Crocker, after blistering recent patches, directs that the loose hair about the patches be pulled out, and the following ointment rubbed in:

Chrysarobin.,	℥ss-i.
Lanolin.,	℥i.
Ol. Olivæ, q. s.	

ALOPECIA SYPHILITICA.

As the hair will return under constitutional treatment local measures, as a rule, are of little importance; if their use, however, is deemed expedient, the preparations mentioned, in preceding paragraphs especially those containing **Bichloride of Mercury**, may be employed.

AMENORRHŒA.

Hot Sitz Baths:—For six days previous to the periods or at the time of the period, mustard may be added. (R.)

Cold Sitz Baths:—Of service; administered as follows: Place the patient in a bath tub with water at 58°, keeping the feet and legs warm and shoulders

covered; after the bath the patient should be well rubbed and placed in bed. These baths should be used only in functional varieties. (Ga.)

Spinal Ice Bag:—Applied to lower dorsal and lumbar vertebræ, are useful in some cases. (R.)

Hot Water Douches:—Friction along spine. Massage. (Bt.)

Electricity:—One of the most reliable emmenagogues. Use either the faradic or galvanic current, the former should be tried first. The primary faradic current is applied as follows: Negative pole in the uterus, positive pole externally to abdomen; seance to last fifteen minutes. Galvanism may be used if faradism fails. Electricity is especially useful for long standing cases which have resisted all other treatment; and in those cases where the parts are poorly developed or atrophied from superinvolution or chronic metritis. (K. C.)

Gymnastics, Sea Bathing and Saline Spring Baths are other serviceable remedial agents. (T. 97.)

ANÆSTHESIA.

Chronic alcoholism, emphysema and fatty degeneration of the heart are peculiarly unfavorable conditions for the administration of anæsthetics. More disasters arise from the latter cause than from any other. Tumors and abscess of brain are also dangerous. Very much enlarged tonsils, swollen epiglottis and œdema of the glottis, are contra-indications, but not insuperable. No operation, however slight, should be undertaken until anæsthesia is complete. Enfeebled persons often bear anæsthesia better than the robust, women and children better than men. It is gen-

erally safer when given for an operation in disease than for injury. Administration should always be on an empty stomach. At first the anæsthesia should be given slowly. Before administering, an ounce or two of whiskey or brandy is recommended by some surgeons.

Morphia Subcutaneously is advised by Bernard to enable the inhalation to proceed more quietly. Many surgeons prefer giving morphia subcutaneously after the operation before recovery of consciousness; this is especially desirable in operations in which the after effects are painful. The quantity of the anæsthetic required is much less, and the stage of insensibility more prolonged when the drug is thus given. It is also claimed that it has the property of antagonizing the paralyzing action of the anæsthetic on the cardiac and respiratory centres and thereby prevents shock. (B.)

Chloroform is attended with more danger than ether, but produces less gastric disturbance. It is less disagreeable, and not inflammable, and is therefore better adapted for administration at night. Its action is also more prompt and the narcosis induced by it more sustained, but these advantages are overcome by the greater freedom from danger which ether possesses. Its use, as a rule, when ether is available is not justifiable. It should be preferred, however, in obstetrics, because of its prompt action, comparative agreeableness and non-inflammability. It has been shown to be safe in labor when properly administered. (B.) The respiration, countenance and pulse should always be carefully watched. The well known A. C. E. mixture, much used in England, consists of Alcohol (95 per cent.) 1 part, Chloroform 2

parts, Sulphuric Ether 3 parts, made up fresh as required. (Ga.)

Ether should always be preferred as an anæsthetic. Administration should proceed at first slowly, and the drug should not be crowded. The pulse, temperature and countenance should be carefully watched. A period of eight to twelve hours fasting should always precede its use.

Means for Meeting Dangerous Symptoms During the Administration of Anæsthetics:

Remove the cone and immediately invert the patient according to Nelaton's method; if respiration has stopped, apply artificial respiration by Silvester's method, forcibly draw out the tongue; use faradism to the respiratory muscles; apply artificial warmth and give amyl nitrate by inhalation. (B.)

Brandy, whiskey and ether are recommended to be given hypodermically, but some observers regard the administration of alcohol and its derivatives in this condition as not only questionable but productive of positive harm. (B.) Inhalation of ammonia are of service.

Nitrous Oxide Gas:—This is a safe agent for short operations, quickly executed, such as extraction of teeth, opening abscesses, etc. It may also be administered with excellent effect preparatory to ether. The patient is first placed under the influence of the gas, which is then withdrawn, and the ether applied. This procedure obviates the unpleasant effects of the first inhalations of ether, often less is required, and the after effects less disagreeable. For those persons who particularly dread taking ether, this is to be commended. Experience and care is necessary for this method of administration.

Local Anæsthesia.:—Sprays of Ether, Rhigolene, or Æthyl Chloride, for freezing the skin.

Cocaine.:—Solutions of 4–10 per cent. are generally successful on mucous surfaces. In minor surgery, and in operations where the circulation can be arrested, solutions of about 4 per cent., subcutaneously, are of great value. In ophthalmology this agent is most satisfactory, being suitable for all operations on the eyeball, except iridectomy for acute glaucoma, and enucleation. In genito-urinary surgery it must be used with caution. (M. W.)

It is also valuable to render painless manipulations in laryngological, obstetrical, genito-urinary and rectal practice. (B.)

Tropacocaine.:—A costly drug; it causes in the eye neither ischæmia, irritation, or hyperæmia; 3 per cent. solutions are employed. Compared to cocaine its action is quicker, but more transitory. The action must be kept up by adding a drop from time to time; mydriasis is slight. It may be employed when it is desired to produce anæsthesia without dilatation of the pupil. No harmful effects have been observed. (M. W.)

Eucaïne Hyderchloride.:—Under this name there are two salts which are different in composition. They are synthetic compounds, allied to cocaine. *Eucaïne Hyderchloride A.* is used for general local anæsthesia. *Eucaïne Hyderchloride B.* is slower in action than cocaine and less active, possessing half the strength, but anæsthesia is more prolonged, and the heart is not affected, nor the pupils dilated. In ophthalmic practice a 5 per cent. solution is effective; for the nose and throat an 8 per cent. solution. (M. W.)

Holocaine Hydrochloride:—Half the strength of cocaine; as an anæsthetic for operations on the eye, it allows more bleeding, but has no effect on the pupil. Its action is prompt and lasting without mydriasis, or disturbance of accommodation. It is not suitable for hypodermic use on account of its toxic effects. (M. W)

Orthoform:—A white crystalline powder, possessing both antiseptic and anæsthetic properties. It is employed locally, in a saturated solution, in a 10 per cent. aqueous solution of the **Hydrochloride**, in a 10–20 per cent. ointment of the same in lanolin, in a saturated solution in collodion, and as a dusting powder. It is useful for burns and painful ulcerations, and appears to be non-poisonous, more than 700 grains having been used locally on a cancer during the course of a week. (L. II., 97.) As a spray for laryngeal and nasal ulceration 5 grains should be dissolved in 50 minims each of rectified spirits of wine and water; for insufflation in laryngeal tuberculosis 3 grains may be administered. The drug does not produce sufficient anæsthetic effect to permit of an operation, though it is said to render painless operations within the uterus. (B. M. J., I., 98.) (M. C., 12, 97.)

Anæsthesia by Infiltration:—Solutions of **Cocaine** 4–5 per cent. are injected along the seat of the intended incision; this is not without danger, as the drug necessarily enters the circulation. When the seat of the incision is so situated the part should be ligated and thus cut off the circulation. The wound should be allowed to bleed before the removal of the ligature.

A useful formula is as follows:

Cocainæ Hydrochlorat.,	grs. iiss.
Morphiæ Hydrochlorat.,	gr. $\frac{1}{3}$.
Sodii Chlorid.,	grs. iii.
Aq. Destill.,	℥iiss.

The proportion may vary from one-tenth the quantity of cocaine to twice as much or more. Injections should be made through the true skin and should be numerous enough to produce insensibility of the surface. At the points of injection wheals will appear. (B.)

Schleich's Anæsthetic Salts:—The composition of these salts to which reference is frequently made is as follows:

According to the *Centralblatt für die gesammte Therapie* for October, 1897, there are three kinds of Schleich's tablets on the market, numbered 1, 2, and 3, as follows:

1. Cocaine Hydrochloride, 3 grains.
Morphine Hydrochloride, 0.675 grain.
Sterilized Sodium Chloride, 3 grains.
To be dissolved in 1,500 grains of distilled water.
2. Cocaine Hydrochloride, 1.50 grain.
Morphine Hydrochloride, 0.675 grain.
Sterilized Sodium Chloride, 3 grains.
To be dissolved in 1,500 grains of distilled water.
3. Cocaine Hydrochloride, 1.50 grain.
Morphine Hydrochloride, 0.075 grain.
Sterilized Sodium Chloride, 3 grains.
To be dissolved in 1,500 grains of distilled water.

ANEURISM.

Rest is imperative and must be absolute. In some instances the recumbent posture has a favorable effect. (Rd.)

Galvanic Puncture has been successful in a few instances. Ciniselli reported twenty-three cases with five cures. In the small sacculated variety it may be employed with some hope. First introduce into the sac a needle insulated except at its point, to this the positive pole is attached, and the negative to a large electrode placed over the abdomen. The current is allowed to pass from three to four hours. Before operating the apparatus should be tested in fresh blood or egg albumen. Danger from embolism appears to be slight. (Gn.) Another method is that of Loreta; two needles are passed into the sac, and a mild current of electricity is passed through, producing both an electrical and mechanical effect. (Ty.)

Ergotin:—Injections of the aqueous extract were first employed by Langenbeck; from 2–5 grains are dissolved in water or glycerine and injected into the region of the sac; or 7–10 drops of Squibbs' fluid extract may be used. The injections should not be made more frequently than once in two or three days under favorable conditions. (Al.)

Introduction of Foreign Substances, such as fine wire, catgut or horse hair, have been employed, passage into the sac being effected through a hypodermic needle. (Ty.)

McEwen's Method:—Render the skin aseptic and insert a needle into the sac until it comes in contact with the other side. The needle may be left in for twenty-four to thirty-six hours. Another plan of McEwen was to introduce the needle, as just described, then to move it about so that the opposite wall of the sac was irritated. The needle was thus moved for about ten minutes, then changed to another point without withdrawing. In this instance the

needle was left in only a few hours. Success has been attained by this procedure. (G. A. O.)

Compression:—This method has been successfully employed in peripheral aneurisms; digital compression is the best plan to be adopted. Relays of students or others continuously applying compression, for forty-eight hours, have resulted in coagulation and cure. (Ty.)

Injection of Astringents:—Solutions of persulphate or chloride of iron or lead acetate are dangerous and should not be used. (G. A. O.)

Injection of Gelatin:—This method has yielded some remarkable results and seems worthy of further consideration, but as yet the subject is too recent to form a decided opinion as to its value.

The operative proceeding is as follows: A solution of 2 grams of gelatin in 100 grams of saline solution is made, this is injected under the skin of the thigh into the subcutaneous cellular tissues in a dose of 250 cu. cm. The injection is renewed at varying intervals of time—from every two days to fifteen days. As a rule, 10, 15, or 20 injections are quite enough to obtain a complete cure. Huchard has employed the method in many cases, one of which was very serious, the pulsation of the aneurism being very strong. A complete cure was obtained by means of 20 injections. The sole inconvenience attached to this treatment is that it was very painful. Certain precautions have to be observed in this method, for a patient under the care of Boisset, in whom injections had been made on a small scale, lest the blood should coagulate all at once, died very suddenly from embolism. The injections must never be made in the neighborhood of the aneurismal sac, and still less into the aneurismal sac itself. (P. M. J., 11, 12, 98.)

Morphia, hypodermically, may be required from time to time to allay pain. (G. A. O.)

ANGINA PECTORIS.

Morphia, hypodermically, is the most prominent remedy; the dose for adults should not be less than $\frac{1}{4}$ gr. (Ty.) It may be effectively combined with **Atropine**, viz: Atropine, $\frac{1}{120}$ gr.; morphia, $\frac{1}{8}$ gr. (An.)

Ice:—The application of cold in the form of ice bags or Leiter's coil to the præcordial region often will afford prompt relief; it is more grateful to some patients than heat, and generally should be first tried. (An.)

Heat:—Hot fomentations, bran poultices, hot water bags, etc., may be used if cold is not effective. (R.)

Hot Sinapisms:—Applied over the region of the heart is a convenient and effective way to employ counter-irritation and affords relief. (Ty.)

Nitro-Glycerine:—1 per cent. solution in 1 minim doses hypodermically, frequently repeated if pain continues, may be used in cases characterized by high arterial tension. (An.)

Amyl Nitrite:—Inhalations of 3–5 drops on a handkerchief affords prompt relief in cases where arterial tension is high; when the vessels are atheromatous and heart fatty it must be used with caution. (B.)

Electricity:—Goodno favors galvanism, following the advice of Eulenburg, who recommends the application of the anode to the sternum, and the cathode

to the lower portion of the cervical region of the spine. Faradism is useful in pseudo-angina. (Gn.)

ANOSMIA.

Strychnine: $\frac{1}{60} - \frac{1}{24}$ gr., in a neutral medium by insufflation was employed by Morrell Mackenzie. It should be remembered that alkaloids are more readily absorbed by the mucous membrane of the nose than by that of the stomach. (Al.)

Electricity:—Galvanism applied daily, using a weak current, increasing the strength according to toleration. Faradism may also be employed. (Bos.)

Stimulation by Powerful Odors:—Powerful but agreeable and non-irritating odors by olfaction are recommended. They should be frequently changed, using half a dozen a day, applying first to one nostril then to the other. Better results are obtained than by strychnine or electricity. (Bos.)

ANTHRAX.

(See Malignant Pustule.)

ANUS—FISSURE OF.

Before making any application order enema if the bowels have not already moved, and cleanse the parts externally with some antiseptic wash.

Nitrate of Silver:—One of the most effective remedies, a weak solution of grs. x-xv to ʒi will often afford relief and should generally be tried first. (Gt.)

The crayon applied every two or three days will sometimes effect a cure, but must be used with caution. (K.) Andrews recommends that the part be

first cocainized, then touched with the fused nitrate and the following excellent ointment applied :

Iodoformis,	℥i.
Ung. Belladonnæ,	℥ss.
Acid. Carbolic,	grs. x.
Cosmolini,	℥ss.

This should be applied thoroughly every day after irrigation with antiseptic lotions. The silver in solution may be repeated every third day. (Ad.)

Goulard's Cerate:—Applied on a small pledget of lint will often effect a cure. (K.) For diminishing the painful sphincter contractions the following ointment has proved very effective:

Morphiæ sulphatis,	gr. ¼.	
Ex. Belladonnæ,	gr. ss.	
Vaselini,	℥i.	(Gt.)

Apply at once.

Dusting powders are frequently both stimulating and healing, viz.: **Calomel**, **Iodoform**, **Iodotannin**, **Bismuth**, etc.; one of the most useful is the following :

Hydrargyri Chloridi Mitis,	℥ii.	
Zinci Stearatis cum Bal. Peru.,	℥ii.	
Sodii Salicylatis,	℥i.	(Gt.)

Conium:—For the relief of painful defecation :

Ext. Conii,	℥i.	
Ol. Ricini,	℥ss.	
Lanolini,	℥i.	(T. 98.)

Zinc Oxide:—℥ss with vaseline ℥i. (K.) **Æsculus Hip.** the cerate after movements. **Hamamelis:**—The tinct. ℥i, glycerine ℥ss, for the soreness around the parts. **Tannin:**—℥i to glycerine ℥iii, introduced on a tent night and morning. (Rd.)

Ichthyol:—First anæsthetize the part with cocaine,

then apply the remedy pure ; repeat the application for several days ; on the fifth application the cocaine is introduced as far as the internal sphincter, the anus slightly dilated with a Nelaton's dilator, and the fissure more thoroughly touched with the ichthyol. For recent cases ten applications will be necessary ; for old, twenty may be required. (T. 98.)

A line of treatment followed, it is said, with some success by certain itinerants, is the following :

Ext. Hamamelidis,	℥v.
Liq. Ferri Subsulphat.,	℥i.
Acid. Carbolic,	grs. x.
Glycerini,	℥ii.

Mix half a drachm of this with half a drachm of starch, and add one and a half ounces of water ; inject this every morning into the bowel.

The following is recommended to be applied with a camel's hair brush :

Hydrarg. Bichlorid.,	gr. i.
Acid. Carbolic., (crystal),	℥ii.
Morph. Hydrochlorat.,	grs. v.
Aq. Destill.,	℥iv.

After application dust with iodoform. An ointment of Mr. Allingham's is the following :

Hydrarg. Bichlorid.,	grs. iv.
Pulv. Opii,	grs. ii.
Ext. Belladonnæ,	grs. ii.
Ung. Sambuci,	℥i. (Ad.)

Hydrastis:—The fluid extract applied pure, tends to promote healing (B.) ; also a glycerole of 1 drachm of the tincture to glycerine half an ounce ; or the alkaloid in combination with hamamelis, viz.:

Hydrastis Mur.,	gr. i.
Tr. Hamamelidis,	℥ii.
Aq. Destill.,	℥i. (Rd.)

Opium, Belladonna, and Stramonium Ointments, and lotions of Cocaine form useful palliatives.

When local remedies, which in many instances are only palliatives, have failed, incision or forcible dilatation of sphincter should be employed.

Incision:—Draw the knife through the ulcer and muscular fibres, which can be done with the use of cocaine injected beneath the ulcer. It is not necessary to cut entirely through the sphincter, yet the muscular fibres at the base of the ulcer should be cut through and the incision made deep enough to produce some relaxation of the muscle. (K.)

Dilatation of the Sphincter:—The patient should be freely anæsthetized, then the thumbs or index fingers are inserted into the bowel and separated in different directions, care being exercised not to lacerate the mucous membrane; the anus should be thus stretched until it becomes patulous. (Gt.)

Daily washing the part with cold water and a soft sponge and avoidance of all local irritation constitute the best preventive. The insertion of a piece of soft lint, changed daily, is also of service. (K.)

ANUS—FISTULA OF.

Some cases will yield to local applications if diligently and patiently pursued, though the majority, especially those of long standing, can only be cured by an operation. In recent cases of ischio-rectal abscess, with external opening and no internal opening, the probabilities of success by the use of local remedial agents are very good. The patient should be kept in bed, the orifice of the abscess enlarged, and free drainage established, followed by antiseptic injections

of Bichloride of Mercury 1–2000, or some other antiseptic. In older cases, when there is a pyogenic membrane, more vigorous measures are necessary, such as turpentine, iodine, etc. (K.)

In children ascarides will often be found to be the cause, upon the removal of which union will generally take place. (All.)

Tents of sea tangle may be introduced into the external orifice of the track for enlarging the opening, permitting free drainage and the application of antiseptic and other remedial agents. (All.)

Carbolic Acid:—Applied in the following manner, has sometimes been attended with good results. A piece of cotton is placed upon the end of a wire, which has been roughened in order to retain it; this is dipped in a solution of carbolic acid, 9 parts, with water 1 part. After thoroughly cleansing, the wire is inserted to the bottom of the fistula, which is then swabbed with the solution; a drainage tube is now inserted to the bottom of the sinus. If the treatment is successful, the tube will be found to require shortening day by day. The application may be repeated. (All.)

A method of treatment which is said by Andrews, of Chicago, to be that of the so-called “Brinckerhoff Cure” is as follows :

Ext. Destill. Hamamelidis,	3v.
Liq. Ferri Subsulphatis,	3i.
Acid. Carbolic,	grs. ii.
Glycerini,	3ii.

Inject 10–15 drops deep into the fistula, and press around its periphery, so that the fluid will sink in more deeply; then inject equal parts of oil of **Eucalyptus**, and **Glycerine**, and keep the patient in bed for two days. (Ad.)

The following will prove of service :

Hydrastis Mur.,	gr. i.	
Tr. Hamamelidis,	ʒii.	
Aq. Destill.,	ʒi.	(Rd.)

For stimulating remedies, Kelsey mentions: Sulphate of Copper, Balsam of Peru, Nitrate of Silver, Chromic Acid, and Caustic Potash.

Antiseptic powders and solutions may generally be employed for cleansing and dressing, as well as for their healing properties.

Paquelin Cautery:—This agent applied to the whole extent of the fistulous tract may be used in some cases of the tubercular variety. (K.)

Operation by the **Elastic Ligature** is not to be considered except when the knife is refused. (K.)

ANUS—PRURITUS OF.

(See Pruritus.)

APOPLEXY.

During the attack, if possible, convey the patient to a large apartment with plenty of cold air, and loosen the clothing around the neck.

Rest:—Should be absolute and the head high, if stertor is present the patient should be placed on the paralyzed side; the movement of the healthy side will then be free, and the affected side of the cranium uppermost, thus doing away with the influence of gravity. If there is difficulty in removing the clothing, rip up the seams. (Gn.)

Ice:—Should be applied to the nape of the neck and

head when there is no collapse, but cold applications are contra-indicated when the face is pale and the surface cold. (Ga.)

Heat and Sinapisms to the extremities and axillæ are indicated in collapse; cloths wrung out in hot mustard water, and wrapped around the limbs, and sinapisms to the nape of the neck should be employed, with the hope of bringing about reaction. (Gn.)

Dry Cups, Turpentine Stupes, and Sinapisms are greatly to be preferred to the old method of cups and leeches, which, however, may do good, but only from their derivative and counter-irritant effect. (B.)

Chapman's Spinal Ice Bag:—This is an important and effective measure, the method of application and indications are fully described in the article on Paralysis.

"Bleeding the Patient Into His Veins:"—This measure was suggested by Dr. Dawbarn, of New York, and is described as follows: Apply Esmarch bandage, a tourniquet, or Spanish windlass, to one or more of the extremities as near the trunk as possible. The apparatus should be sufficiently tight to obstruct the return flow through the veins quite thoroughly, but not so much as to interfere with the arterial flow. Experimental evidence shows clearly that this procedure lowers arterial tension, and favors cessation of internal hæmorrhage. The pressure should be kept up for about an hour, then the blood should be permitted to enter the general circulation very slowly. The only objection to this method is that of possible danger in the hands of those who are unskilful and lack judgment." (Gn.),

APPENDICITIS.

The following, in conjunction with internal medication, is advocated by Dr. M. O. Terry:

Colon Enemata:—Every three to six hours. In the first instance inject 4 ounces of **Glycerine**, following with an injection of **Soda Bicarbonate**, 1 drachm to one quart of water; in subsequent enemata 6-8 ounces of **Sweet Oil** are injected after the colon enema. The hips of the patient during the administration should be well raised. **Hot Fomentations** of flaxseed are kept applied to the abdomen and hot sweet oil is poured over the poultice and applied to the abdominal walls. (M. T., 11, 97.)

Ice applications afford relief and may act as a substitute for morphine. (Ty.)

Morphine:—From a surgical standpoint is condemned, pain, it is claimed, being relieved by evacuations. (Cr.) It is advised by some medical writers to be administered hypodermically, but never by the mouth. (Ty.)

Operation:—Dr. G. F. Shrady has summarized the indications as follows:

1. The continuously frequent or progressively accelerated pulse rate is of itself a prime indication for operation.

2. Pain, localized and progressive, is a valuable associated condition. When pain is sudden, severe, and progressive, and accompanied with chill, it means perforation or abscess rupture and immediate operation.

3. Increase of temperature is third in importance, but when associated with one or more of the previ-

ous symptoms, and more especially with increase of pulse rate, it makes immediate operation a foregone conclusion.

4. The gradual subsidence of the three cardinal symptoms—pulse rate, pain, and temperature—is a legitimate reason for postponing immediate operative interference.

5. In cases of abscess it is generally safer, while watching for urgent indications, to wait until adhesions have formed a sufficiently protective wall.

6. In cases of recovery after mild attacks and without operation we are never sure of recurrence until the latter takes place, when the operation can be done soon enough, and, all other circumstances being equal, preferably in the interval of a succeeding attack and when the tissues are not in an inflamed condition.

The fact must not be overlooked that there are exceptions to all the points named; that patients with a temperature and pulse almost normal and with little pain may become rapidly worse and die; that cases which are apparently mild in the beginning may develop most alarming symptoms in the end. Few, however, present these phenomena without some preliminary warning. These are irregular cases and should always arouse suspicion. (M. R., 9, 1, 97.)

ARTHRITIS.

Lithium Carb.:—Garrod has been successful in removing gouty deposits from the hands and fingers by the use of lint soaked in a solution of 5 grains to the ounce and kept constantly applied. (Al.)

Cold Water Compresses:—Applied to the involved joint are often of benefit; a 10 per cent. solution of salicylate of soda may be used for wetting the compresses. (Sm.)

Dry Superheated Air:—The application of dry heat at a high temperature has been attended with good results. A specially constructed apparatus is required for the purpose. (A. S.)

Cataphoresis:—The following method is of value: The positive pole connected with a carbon electrode is immersed in a vessel containing a 2 per cent. solution of lithium chloride, which has been rendered alkaline with lithium carbonate; the negative pole is placed in another vessel containing a weak solution of chloride of sodium. The part to be treated is immersed in the lithium carbonate bath, and a convenient member, as the hand or foot, is placed in the salt solution. The battery should be one of 48 Leclanche cells and a current of 10–30 milliampères should be applied for thirty minutes; some can only stand 10 milliampères. Good results have also been obtained with salicylic acid and salicylate of soda used in a similar manner. (T. 98.)

Galvanism applied directly to the joints also affords relief of the pain. (Gn.)

Massage:—This is the most efficient measure for the reduction of swelling, as it promotes absorption of the inflammatory exudates and lessens the rigidity of the joints and muscles. (An.)

The baths of Hot Springs, Virginia, and Arkansas, of Richfield, N. Y., St. Catherine, in Canada, Aix les Bains, La Bourboule, Royat, Weisbaden, Homburg, Gastien, Carlsbad, Wiltbad, Aquis, and Battaglia, in Europe are among the most prominent. The selec-

tion of one of these springs must depend upon the requirements of each individual case, for what will suit one will not benefit or will positively harm others.

When trophi burst and form indolent ulcers which penetrate to the joint, the most effective way to obtain resolution is to immerse the part in hot water for some hours daily. (Alb.)

APHTHÆ.

(See Stomatitis.)

ASCARIDES LUMBRICORDES.

(Round Worms.)

These parasites have their seat in the small intestines, but being liable to migrate they may sometimes be reached by the injections used for seat worms.

ASCARIDES VERMICULARES.

(Seat Worms.)

Before using any form of rectal injection for the removal of these parasites the bowel should be first cleansed by an enema of warm water.

The following injections are recommended:

Infus. Quassia, one of the most efficacious; **Lime Water**, simple and satisfactory; **Salt**, 3 tablespoonfuls to half a pint of water; **Salicylic Acid** and **Bicarbonate of Soda**, half a drachm of each with 1 pint of water.

ASPERGILLUS.

Boric Acid:—As a lotion is especially effective after bichloride of mercury lotions. (Al.)

Chlorinated Lime:—Grains ii– ʒi , useful for destruction of colonies of these growths in the external meatus. (Al.)

Acid Salicylic:—2 per cent. in dilute alcohol. (Bn.)

Chinoline Salicylate and Boric Acid:—1 part of the former to 8–16 of the latter, gives the best results, and should be tried first.

Dr. Hinton recommends the following:

Liq. Plumbi Subacetatis,	Mxx.
Acidi Acet. Dilutis,	Mvi.
Liq. Opii Sedativi,	Mxx.
Aq. Destillatæ, q. s. ad.	ʒi .
10 drops in the ear.	

Alcohol:—Instilled several times a day forms an excellent parasiticide; after its use the débris may be easily syringed away. (Str.)

ASPHYXIA.

The conditions produced by the inhalation of ordinary illuminating or other poisonous gases, as well as asphyxiation by smoke or hanging, are all essentially the same and require the same treatment. Give the patient plenty of air; dash cold water on the face; administer inhalations of ammonia and slap the epigastrium. If these simple measures have no effect, immediately employ artificial respiration as subsequently described.

Asphyxia from Drowning:—The treatment should be carried out at once at the place of rescue, except perhaps in extreme weather. Immediately turn the patient over with the face downward resting on one arm with the wrist under the head in order to cause

the water to run out of the mouth and throat. The abdomen may rest on a roll of clothing. Run the fingers into the mouth to clear away any obstruction, then with the patient in this position press each side of the back over the lungs. This is done to expel any water that may be in the upper air passages. Next turn the patient on his back, strip to the waist and rub dry. These procedures should be executed with the utmost rapidity, and during the time they are being carried out, an assistant may apply inhalations of ammonia. If these efforts are ineffectual, employ artificial respiration by Silvester's or Marshall Hall's method.

Silvester's Method:—Place the patient on his back with a cushion or a folded coat under his shoulders. Next draw the tip of his tongue forward in order to prevent obstruction of the air. The tongue may be grasped with a handkerchief or covered with sand or earth to prevent slipping; if alone, tie the tongue against the lower teeth by means of a strip of cloth or muslin, carrying the ends around the neck and tying on one side. Now kneel behind patient and grasp both arms half way between the elbow and wrist, then draw them gently but steadily upward until they meet on the ground above the head. Retain them in this position two seconds, then bring them down gently, thus reversing the movement, and press them firmly against the chest walls for about three seconds, causing the elbows to meet over the epigastrium. This manœuvre should be executed at the rate of fifteen to sixteen times a minute.

Marshall Hall's Method:—The patient is placed flat on his face. Then gentle intermittent pressure is made with both hands on the back, the body being

turned on the side or a little beyond; then on the face and the same pressure continued. The whole body should be worked simultaneously, and the movements made at the rate of fifteen to sixteen per minute.

Michigan Method:—The patient is laid on the face and the head upon the arm. Then stand astride the body, and grasp it about the shoulders and armpits and raise the chest high as you can without lifting the head quite off the arm. Hold it in this position for about three seconds, then replace the body on the ground, and press the lower ribs downward and inward with a slowly increasing force for three seconds, then suddenly let go and commence the movement over again. The Silvester method is generally employed in preference to the others.

The temperature of the body during the process of resuscitation should be maintained by hot water bottles, hot bricks, flannel, etc. Friction upward should also be employed.

Asphyxia Following Anæsthesia: (See that subject.)

Asphyxia in the New Born:—When labor has been long, tedious and difficult, preparations should be made beforehand for the reception of a probably asphyxiated child. A table with waterproof sheet and receptacles for hot and cold water should be at hand, also a soft rubber catheter or some such instrument for clearing the throat of mucus.

(A) Treatment of the first or comparatively milder forms: Remove all obstructions from the air passages, clearing mucus from the throat and mouth, slap the buttocks, irritate the skin with rubbing, and pass before nostrils some diffusible stimulant, such as cam-

phor spirits, or preparations of ammonia. To remove mucus, pass the finger into the throat or press the trachea with the fingers as low down as the bifurcation and gently squeeze it against the larynx, this forces the mucus into the pharynx whence by blowing into the mouth it can be forced out through the nose. If the infant does not now begin to breathe, a warm bath should be administered, or alternate cold and warm baths.

(B) Treatment of the second or severe form: The air passages should of course be cleared of mucus. Then artificial respiration should be practiced according to the method of Silvester or according to the proceeding of Schultz, which is as follows: Grasp the child by the shoulders, placing the index fingers in the axillæ and the thumbs curved forward over the shoulders so as to meet the ends of the fingers; thus the entire weight of the child's body rests upon or within a circle made by the thumb and first finger of both hands. While the body is thus hanging perpendicularly, the ribs are lifted out and chest expanded, and an artificial respiration produced. The body is now swung forward with some force at arm's length until the operator's arms are about on a horizontal line. A somewhat abrupt termination of the movement causes the child's thorax to become stationary, while the lower limbs fall forward upon the abdomen; the abdominal viscera now press against the diaphragm and produce expiration, the body is returned to the first position and the manœuvre repeated. Seven to eight seconds are required for each movement, which should be repeated eight to ten times per minute. After two or three minutes administer a warm bath. (Am.)

Blowing into the mouth is another procedure employed to inflate the lungs. When this is done cover the infant's mouth with a towel and blow in it and press the lungs gently. (Am.)

Asphyxia from Foreign Bodies:—When a foreign body in the air passages is the cause, invert the patient and forcibly slap him on the back. This procedure is indicated more especially when the object is smooth and round. If this fails laryngotomy or tracheotomy should be performed immediately. (P.)

ASTHMA.

Treatment of paroxysms will vary widely in different individuals, and not infrequently the patient from experience will know the remedies most effective in his case.

Cocaine:—Regarded by some observers as of the first importance, should be applied to the nostrils with an atomizer or ordinary dropper, and repeated every four minutes until relief is obtained. It is claimed that on account of the intimate sympathy between the nasal and bronchial mucous membranes, cocaine thus administered will afford relief. (Bos.)

Stramonium:—Used by burning the leaves and inhaling the smoke, or smoking cigarettes made of the leaves, or better yet by placing some of the leaves in a pipe and smoking. The drug should be watched. The smoke of about half an ounce of the leaves may be used at a sitting. A sensation of heat in the lungs, fulness of the head and nausea are indications that a maximum impression has been attained. (Al.)

The following is for a fuming inhalation:

Stramonium Leaves,	℥i.	
Powdered Fennel Fruit,	℥ss.	
Iodide of Potash,	℥i.	
Powdered Anise Fruit,	℥ss.	
Black Tea in Powder,	℥i.	
Nitrate of Potash,	℥i.	(T. 97.)

Nitrate of Potash:—A very common and effective remedy by inhalation. Saturate a piece of blotting paper about five inches square in a strong solution of the saltpetre, allow it to dry thoroughly, place it in a saucer by the bedside and ignite. Many patients will fall asleep amid the fumes. (Al.)

Pulv. Lobeliæ Comp.:—This is prepared as follows: Nitrate of potash, boiling distilled water, 240 parts each; dissolve and add to lobelia in powder, stramonium leaves in powder and black tea in powder 240 parts each. Mix well, dry, and add oil of anise 1 part. The fumes of half a teaspoonful or more burnt on a plate may be inhaled six or eight times a day, and the bed room fumigated with the same. This is said to be an imitation of the well known nostrums, Himrod's, Bliss' and the Green Mountain Cures. (M. W.)

Morphia:—Alone, or with atropia in doses of $\frac{1}{4}$ gr. and $\frac{1}{120}$ gr. respectively, subcutaneously, often relieves, acting when all other measures have failed. The danger of forming the morphine habit should be considered. (An.)

Amyl Nitrite:—A few inhalations of from 4–6 drops will act speedily in a certain proportion of cases. (Rd.)

Ethyl Iodide:—Inhalations give good results; use 8–10 drops on a sponge. (T. 96.)

Chloroform:—Direct inhalations, or the fumes from some, poured on hot water, will afford quick re-

lief. The danger of the habit should not be forgotten. (B.)

Arsenic:—Formula of Trousseau for arsenical cigarettes:

Arsenite of Potash,
Distilled Water,

grs. xv.
℥i.

Unsize paper is thoroughly wet with this solution, dried, and cut into twenty equal parts, each of which is to be rolled into a cigarette, and two or three smoked daily.

The arsenite of soda may be used under similar conditions in the same way, the strength of the solution being 1 drachm to 1 ounce of distilled water; each cigarette should contain from $\frac{1}{4}$ –1 grain. (B.)

Pyridine:—Place a saucer containing about a drachm of the remedy in a small room or closet which can be tightly closed. The patient then enters and remains for twenty to thirty minutes; this can be repeated from two to five times a day. In simple cases it is claimed a cure may be effected in from ten to thirty days. It is said to be useful in asthma from any cause. (B.)

Dilute Hydrocyanic Acid:—3 drops to half a pint of hot water; inhalations of the vapor will often arrest paroxysms. This was recommended by Mackenzie and others.

Grindelia Robusta:—A remedy of value. The plant should be steeped in a saturated solution of nitre, dried, ignited and the fumes inhaled or made into cigarettes and smoked in connection with stramonium or tobacco. (B.)

Methyl Chloride:—Sprays applied rapidly over the back of the patient are said to cause an attack to

cease in a few minutes. If they are not successful light spraying on the upper part of the chest may be tried. (Sj.)

Strychnine:—Subcutaneous injection of a combination of the sulphate of strychnine $\frac{1}{20}$ gr. and the sulphate of atropine $\frac{1}{200}$ gr. repeated daily, have been used. (Sj.)

Belladonna:—In pastels with stramonium, lobelia or hyoscyamus. (B.)

“**Cigarettes d’Espic**” are said to be made of the following ingredients:

Belladonna leaves,	5½ parts.
Hyoscyamus leaves,	2¾ parts.
Stramonium leaves,	2¾ parts.
Phellandrium aquaticum,	1 part.
Extract of Opium,	⅓ part.
Cherry-laurel water,	q. s.

The dried leaves, stripped of their stems, are cut small, well mixed, and then moistened with the opium dissolved in the cherry-laurel water. The paper used for making the cigarettes is also soaked in an infusion of these leaves in cherry-laurel water. Usually, in making these cigarettes, a little nitrate of potash is added to the infusion to make them burn freely.

“**Carton fumigatoire**” of the French codex—a very useful preparation—is thus made: Take 7 ounces of gray unsized paper and 2 ounces of powdered nitre; take of belladonna leaves, stramonium leaves, digitalis leaves, and lobelia leaves, each 75 grains; take of powdered myrrh and powdered oliban, each 150 grains. Tear the paper in pieces and soak it in water, then add the powders previously mixed, and pound and beat them all together. Then spread out the soft paste in tin moulds, and dry it in a stove. Finally

cut this quantity into thirty-six pieces, each 6 centimeters long and 4 centimeters wide. One of these is burnt in the patient's room. (Y.)

Galvanism of the pneumogastric and cervical sympathetic has relieved some cases and entirely failed in others. (B.) This, however, may be said for all remedies recommended for asthma.

In adopting any of these expedients ventilation must not be neglected; the windows should be regularly thrown wide open to renew the air of the apartment. It is well to keep the atmosphere of the room moist. (Ga.)

The shower-bath is a valuable and potent agent to fortify the body against asthma; the sudden application of water strengthens the whole system, and renders the body less sensitive to atmospheric changes. Out-of-door exercise, as walking or riding, is also useful, but it should not be taken until one or two hours after a meal, or to such an extent as to occasion fatigue. (Rd.)

BALANO—POSTHITIS.

In mild cases cleanliness with the application of some bland powder is usually all that is necessary. (T. 97.)

Tepid Water Injections beneath prepuce frequently applied (W.), and strips of lint laid between the foreskin and the glans removed as they become moist, are useful.

The parts should be bathed every two to six hours with one of the following solutions:

Carbolic Acid, 1-100.

Mercuric Bichloride, 1–5000.

Boric Acid, saturated solution.

Succus Calendulæ, 10 drops to water 1 oz.

Aqueous Hydrastis (Ernesty) 10 drops to water 1 oz. (Cl.)

Alumol, 1–5 per cent. strongly recommended. (Sm.)

Zinc Sulpho-Carbolate, 1–5 per cent. (H.)

After cleansing with an antiseptic solution dusting powders will be found effective, such as **Alum**, **Tannin**, **Bismuth Subnitrate**. While using, the parts should be kept separated with a piece of lint. (Cl.)

Lead and Opium Wash, continuously applied for oedema of the prepuce, is very beneficial. (H.)

Fld. Ext. Hydrastis, 1 part with dilute alcohol 4 parts as a lotion. (Sm.)

BEDSORES.

Preventives.—The utmost care should be exercised to guard against the formation of bedsores. Moisture being a potent factor in their causation, the patient should be kept thoroughly dry and scrupulously clean. Pressure upon bony prominences must be relieved as much as possible with air cushions, and in very protracted illnesses air or water beds should be used when practicable. The exposed parts should be bathed with Castile soap and warm water, then carefully dried with a soft towel.

The following are recommended for application with the view of hardening the skin and preventing the formation of sores:

Olive Oil 3 parts, with 1 part of **Laudanum**, and 2

of Brandy, was recommended by Florence Nightingale. Brandy, Proof Spirit or Alcohol diluted. (Bt.) Collodion, as a protective. (N.)

Alum, used in various ways, the following are advised :

Alumin.,	℥ss.	
Albumin. Ovi,	iv.	
Tr. Camphori,	℥ii.	(B.)

Or:

Alumin.,		
Sod. Chlor.,	āā ℥ss.	
Aq. Destill.,		
Alcohol.,	āā Oi.	(Sn.)

Ammon. Nitrate:—5 grains with half an ounce each of alcohol and water, diluted with equal parts of water was used by Agnew for rubbing on the back. (Al.)

Nitrate of Silver:—Grs. x-℥i painted on when the skin is red but not broken, is one of the best preventives. (F.)

Other useful preventives are soap plaster retained in place by adhesive plaster, Decoction of Oak Bark, Glycerine, Glycerine Cream, Opium Liniment, Spirits of Camphor, Hamamelis, Lime Water and Solutions of Gutta Percha.

When Sores Have Formed antiseptic washes, such as the following are called for:

Hydrarg. Bichlorid., 1-3000-5000.

Boric Acid., saturated solution.

Hydrogen Peroxide, 1-8 or stronger.

Creolin, 5-1000.

Pyoktanin, 1-1000.

After the application of the selected antiseptic solution, one of the following dusting powders may be

used: **Acetanilid**, **Airol**, **Dermatol**, **Nosophen**, **Iodoform**, or **Naphthalin**, the latter in the strength of 5-10 per cent., the others pure. The same remedies may also be used in the form of ointments.

Calendulated Boric Acid:—Dusted over the surface, is highly endorsed, being employed with excellent results at the Middletown State Hospital for the Insane.

Calendula:—1 part of the succus with 4-5 of a 1 per cent. solution of carbolic acid forms a satisfactory lotion for the relief of soreness. (M. H.)

Compound Zinc Stearate with a little **Tannin** may be used with good effect. (Sm.)

BITES OF INSECTS.

Liq. Ammon., **Ledum** or **Rhus Tox.** of either, 10 drops of the mother tincture to the ounce of water. **Lime Water**, freshly prepared, a slice of an **Onion**, **Moist Clay**. (Rd.)

Cupri Sulphat.,	grs. v-xv.
Potass. Bicarbonat.,	ʒi.
Aquæ,	Oi. (Sm.)

Or

Collodii,	ʒiiss.
Acid. Salicylic.,	grs. xv.
Tr. Benzoin.,	gtt. xv. (T. 97.)

Camphorated Chloral will quickly arrest pain, and is effective for the bites of scorpions. (M. W.)

Ichthyol:—A 10 per cent. plaster or an ointment equal parts with lanolin, or the pure drug in severe cases, has been productive of good results. (T. 98.)

Potass. Permang:—A 2 per cent. solution subcutaneously, is the best treatment for stings of bees and other poisonous insects. (M. T. 9, 98.)

Cocaine:—Solutions will relieve the pain. (M. W.)

Nitric Acid:—May be used when a cauterant effect is deemed desirable as in the case of stings by especially poisonous insects. (N.)

The following is recommended as a preventive:

Acetic Ether,	5 parts.
Eucalyptol,	10 parts.
Cologne Water,	10 parts.
Tr. Pyrethrum,	50 parts. (T. 98.)

BITES OF SERPENTS.

Ligation should be applied immediately to the limb above the wound, which should be sucked or incised and allowed to bleed freely. An attempt should be made to express the poison by bandaging the limb downwards. When the ligature is removed it should be slackened slowly. The Chinese apply as many as six tight bands above the wound and generally escape. (T. 98.)

Cauterants, such as the **Actual Cautery**, **Nitric Acid**, **Carbolic Acid** or **Bromine**, are generally employed after sucking the wound. (Ga.) (B.)

Potass. Permang:—First apply a ligature, then inject subcutaneously a 1 per cent. solution near the periphery of the point of penetration of the serpent's fang. This is regarded in Brazil as a very effective antidote. (Ga.)

Tr. Iodine:—Painted on the wound until active supuration takes place, is said to be a trustworthy application for rattle snake bite. (N)

Euphobia Prostata:—Used by the Indians and settlers in Arizona as an infallible remedy against bites of poisonous insects and snakes, especially the rattle snake. (N.)

Aralia Spinosa:—A decoction is used by Southern negroes against rattle snake bites. (N.)

Calmette's Antivenene Serum:—Reports of the successful application of this remedy have been received from various sources. Apparently there are two factors in snake venom to be dealt with, one which acts locally and the other which causes general or constitutional symptoms. These can be separated chemically and physiologically, and require different antidotes. The poison in the wound may be treated by a solution of **Hypochlorite of Calcium**, 1–60, while for the toxine which causes the constitutional symptoms the antivenene serum should be used. A case is reported which was apparently at the point of death, where 20 c. c. of Calmette serum injected under the skin of the abdomen brought about recovery. This was administered three hours after being bitten; a second dose of 10 c. c. was given on the second day, this being the full amount. (T. 98.)

Strychnine:—Subcutaneously in large doses has been successfully used in Australia, and the East Indies. It is employed in large doses, carefully watching the effects. According to the severity of the condition, amounts, varying from $\frac{5}{6}$ to 3–4 grains, were given in divided doses in different cases. The symptoms were progressively relieved and no toxic symptoms from the strychnine were produced. (Sm.)

Digitalis and alcoholic stimulants, especially whiskey, should be administered hypodermically. (B.)

BLADDER—IRRITABILITY AND NEURALGIA OF.

Full sized steel sounds passed every fourth day have been effective in many cases. (Cl.)

Nitrate of Silver:—Grs. i–ii to $\mathfrak{z}\text{i}$, one to three drops applied with the Taylor syringe to the prostatic portion of the urethra, is indicated in some cases. (Cl.)

Aqua-puncture has been successful. (B.)

BLEPHARITIS.

Rest and strict cleanliness should be enforced and any errors of refraction corrected. After the removal of the scales, which should be done gently, the following may be used: **Hydrarg. Oxid. Flav.**—grs. v, vaseline $\mathfrak{z}\text{i}$ is valuable for destroying any parasite which may be present and for keeping the parts clean and secretions soft. (Mac.) On account of the fineness of its particles it is more suitable than the red oxide, which may also be used. (N.)

Formalin:—May be employed in all cases in solution of the strength of 1 per cent. to 2 per cent., beginning with the weaker. It must be prepared fresh, or at the time of using to insure uniformity of strength. A small cotton mop is used for daily applications. The proportion of cases benefited and the measures of relief given, make it a superior remedy. (P. M. J., 9, 24, 98.)

Chloral Hydrate:—1–10 in solution applied with gentle friction is valuable when the scales are difficult

to remove. (T. 97.) A weaker solution of 5 grains to the ounce is also recommended. (T. 98)

Ung. Hydrarg. Ammoniat.:—Gr. ss— $\bar{z}$ i. (N.)
Tannin:—Grs. v— $\bar{z}$ i. (B.) **Bismuth Subnitrate**:—Equal parts with glycerine, in ciliary and granular forms. (Wa.) **Sulphur and Resorcin**:—2 per cent. each, in an ointment for squamous types. **Sulphur Ointment**:—When there is distinct desquamation. **Pyrogallic Acid**:—5–10 per cent. ointments have given good results. (T. 97.)

Nitrate of Silver:—Grs. x— $\bar{z}$ i, applied to the roots of the hair acts well in some cases, followed afterwards with vaseline to neutralize the effects of the silver solution. (Ro.) The crayon may be used on exposed ulcers followed by mercurial salves. (T. 97.)

Acetate of Lead:—The following is for application to the edges of the lid:

Neutral Lead Acetate,	grs. ii.
Cocaine Hydrochlorate,	grs. iii.
White Vaseline,	grs. xlv.

Aristol:—Grs. x— $\bar{z}$ i an effective ointment. (T. 98.)

BLISTERS.

For healing the milder forms of burns and erythema:

Cerat. Cetacei.

Cerat. Plumbi Subacetatis.

Cerat. Resinæ.

Fld. Ext. Grindeliæ Robust., $\bar{z}$ ss., Aquæ, $\bar{z}$ iv–vi.

Infus. Sambuci.

Ung. Cetacei.

Ung. Zinc. Oxidi. (N.)

BOILS.

(Compare Abscess.)

Hydrarg. Bichlorid.:—Solutions of 1–1000 should be used for washing the boil and surrounding parts. (B. H.)

Phenol and Mercurial Plaster:—Render the lesion and surrounding surface aseptic with a bichloride solution 1–1000, then cover the part with the plaster, changing daily or oftener. If used before fluctuation absorption may be expected. The results of this treatment are excellent. (T. 97.) Van Hoorn recommends that the plaster be changed daily, and the patient be ordered to change the underclothing frequently. Unna's plaster of carbolic acid and mercury, is warmly endorsed by Hardaway; the plaster, extending well beyond the lesion, should be used in place of a poultice which is condemned by this author. A small opening is cut in the centre over the conical point of the boil, thus applied, maturation will be hastened. (Hd.)

Iodoform:—When pain is severe, viz:

Iodoformi,	℥i.	
Ung. Vaselini Plumbici,	℥i.	(Hd.)

Iodine:—The strong tincture frequently painted on the part has been used with a view of aborting; it is, however, regarded as of doubtful utility. (B. H.) Jamieson and Haller recommended the following:

Tr. Iodi,	℥i.	
Acid. Tannici,	℥ss.	
Pulv. Acaciæ	℥ss.	(Hd.)

Carbolic Acid:—This remedy is also employed to abort the formation of furuncles; it is, however, condemned by some observers when used alone for this purpose. (B. H.) The following are the methods of its application: Inject a 2 per cent. solution, then touch the surface with the pure acid and cover the part with a carbolized dressing, or heat some of the crystallized acid on the point of a probe to the melting point and press the same on the surface of the furuncle. (Sj.)

The following is very effective:

Acid. Carbolic,	grs. v-x.
Ext. Ergotæ,	ʒi-ii.
Pulv. Amyli,	
Zinc. Oxidi,	ãã ʒii.
Ung. Aq. Rosæ,	ʒii.

Take a piece of absorbent cotton several times the size of the inflamed surface, and spread the ointment on, taking care that no pressure is made to hold the plaster in place except at the edges. This will afford marked relief, and is used by its author (Bulkley) for boils in all stages. It should be changed every twelve hours. (Bk.)

Collodion:—At the pustular stage for small boils and pimples, used on account of its contractile power, is often effectual in arresting development. (Al.)

Resorcin:—A thick layer of the ointment made with vaseline has good effect in carbunculous boils. (N.)

Arnica:—The tincture or extract of the flowers 1 part, and 2 parts of honey, with an inert powder, is used with a view of arresting. (N.)

Nitrate of Silver:—5-20 grains to 1 ounce of nitrous ether, painted on to abort, is specific if ap-

plied early. (R.) See also Higginbottom's method under abscess.

Airol:—A 10 per cent. gauze has proved very effective. (T. 98.)

Opium:—The powdered extract mixed to the consistency of a syrup and applied several times a day. (Al.)

Pyoktanin Blue:—As this agent completely arrests the development of the staphylococcus aureus it should be an effective application. As a dressing it is commonly employed in solutions of 1–2000 to 1–100. As an ointment in strength of 2–10 per cent. The deep purple stain which it causes on the skin and linen, and which constitutes an objection to its use, may be removed by dilute hydrochloric or nitric acid, alcohol or cologne water. (F.)

Belladonna:—A plaster is used to subdue inflammation or linen soaked in a solution of **Atropine**, grs. iv–ʒi, with water or glycerine for the relief of pain (R.) or the ointment with equal parts of glycerine spread on linen. (Al.)

Poultices:—Hot fomentations, to assist maturation and allay pain, should generally be applied. They may be sprinkled freely with **Tr. Belladonnæ**, or **Tr. Opii**. (W.)

The following is recommended to be applied to the surrounding skin during the course of the boil:

Acid. Boric.,	ʒi.	
Zinc. Oxid.,	ʒi.	
Pulv. Amyli,	ʒiii.	
Vaselini,	ʒi.	(Hd.)

BOWELS, OBSTRUCTION OF—INTUSSUSCEPTION — FÆCAL IMPACTION.

The radical treatment is abdominal section, but inasmuch as non-surgical measures are effective in some cases they may be employed first. (Gn.)

Morphine:—Hypodermically administered is of great service for the relief of pain and spasm, rendering the following measures more efficient. (Gn.)

Gastric Lavage:—Affords great relief to the incessant vomiting, and is often followed by reduction of the displacement; it may be repeated at intervals of six hours. (Gn.)

High Injections:—If the cause is determined to be fæcal impaction or if the obstruction is in the large intestine, copious injections should be tried, using for this purpose a warm saline mixture of olive oil, administered by means of a fountain syringe, while the patient is in an inverted position. The abdomen should be well kneaded, and the body well shaken. The injection should be repeated regularly. (An.)

Inflation with Hydrogen Gas or Air:—If injections fail, two or three gallons of the gas or air may be carefully introduced (Senn) from a large rubber bag. Thorough manipulation of the abdomen may be combined, especially if there is intussusception. In this condition inflation, early and perseveringly applied, will succeed in the majority of instances. (An.) Jonathan Hutchinson recommended inflation by warm air or water, administered while the patient is in the knee and elbow position, with thorough

kneading of the abdomen. This method, says Goodno, is not without risk of causing perforation of the bowels. (Gn.)

Enemata:—Infus. Lobelia:—Half an ounce to a pint of hot water, employed for the relief of obstruction arising from intussusception, strangulation and impaction. (F.)

Infus. Tobacco:—Half a drachm to a pint of hot ter, macerate for six hours and filter, inject one-quarter to one-half the quantity, repeating in half an hour, if necessary, carefully watching its effects. (Sn.) Tobacco holds a secondary place as an anti-spasmodic, and care is necessary to avoid toxic effects.

Effervescent Enemata:—Are prepared as follows:

Sodii Bicarb.,	℥ii-iii.
Aquæ,	℥vi.

Inject into the rectum, and immediately follow with:

Pulv. Acid. Tartarici,	grs. xxxv-xlvi.
Aquæ,	℥iv. (B.)

Ox Gall:—Injections are useful for the relief of fæcal impaction, viz:

Fellis Bovis Inspissat.,	℥iii.
Glycerini,	℥ii.
Acid. Salicylici,	grs. xv.
Aquæ,	q. s. ad. ℥vi.

Use in quantities of one half to two ounces, mixed with soap suds. (H. F.)

In severe cases of tympanitis a trocar may be inserted. (An.)

Intussusception, or strangulation, if not relieved within twenty-four hours, demands immediate operation, longer delay is dangerous. (W.)

BRAIN, CONCUSSION OF.

The symptoms of concussion are those of shock with the cerebral symptoms in addition. No treatment is called for in the early stages, unless the collapse is very alarming, when stimulants will be necessary, but they are not indicated in cases of average severity. The tendency to death in pure concussion is from syncope and shock causing failure of the heart action. The administration of stimulants in these conditions must be such as will be least liable to provoke inflammation.

The patient should be placed in a warm bed with the head at first moderately low. Heat should be applied to the axillæ and extremities. Absolute quiet must be enjoined and no attempt should be made to arouse to consciousness, nor food or drink administered. If depression be prolonged mild stimulants, such as ammonia, will be called for, and in extreme cases stimulating enemata may avert impending death. Great firmness is often necessary to withstand the urgent demands of friends for expectant measures. When reaction appears the head and shoulders should be raised a little and cold applications and evaporating lotions applied. The apartment of the patient should be cool and carefully guarded from noise and the light modified. Conversation around or near him must be avoided. After recovery he must be kept under observation for two or three weeks lest some insidious inflammation develop. (Rd.)

BREASTS, SWOLLEN AND PAINFUL, INFLAMMATION OF.

Collodion:—An application covering the entire breast, will often relieve congestion and prevent sup-
puration. (F.)

Camphorated Oil or Camphor and Lard:— $\text{ʒi-}\mathfrak{z}\text{i}$,
rubbed in gently will sometimes abort suppuration.
(Bt.)

Roller Bandage:—Snugly applied around the body
so as to give firm support, will arrest the formation
of an abscess. It should be reapplied daily. (Ga.)

Massage and Evacuation:—Rub gently in the direc-
tion of the nipple, and evacuate with breast-pump.
(Sj.)

Olive Oil:—As soon as hardness appears rub with
the oil from circumference to centre, and support the
breast with a sling made of a broad handkerchief.
(Ga.)

Belladonna Ointment:—Applied on lint and cov-
ered with linseed meal poultices, if used as soon as an
inflammatory blush appears, will, as a rule, cause all
traces of inflammation to disappear in twenty-four
hours. (T. 97.)

Stramonium:—The leaves as a fomentation are
effective as an anodyne for engorged breasts. (Sn.)

Phytolacca Dec.:—The tincture sprinkled on hot
flannels (Ga.), or the following ointment:

Pulv. Phytolaccae Rad.,	$\mathfrak{z}\text{i}$.	
Camphoræ,	grs. x.	
Ext. Belladonnæ,	$\mathfrak{z}\text{i}$.	
Ung. Zinc. Oxidi Benzoat.,	$\mathfrak{z}\text{i}$.	(Sm.)

Phosphated Oil:—Applied with cloths, and gently rubbed in. **Ammon. Carb.**, ʒi—Oj, compresses well saturated with the solution, if applied early, will prove very satisfactory. **Chloroform** and **Glycerine**, equal parts. **Castor Oil** and **Glycerine** equal parts; very soothing. **Ext. Hamamelidis**, Applied on lint. (Bt.)

Spts. Vini Rect.:—When the skin is tense and hard, and the veins distended, sponge the parts until quite cold, repeating as soon as heat returns. A few spongings will afford relief. (Rd.)

Heat:—Applied by means of a bowl lined with flannel saturated with hot water and placed over the breast, is one of the most effective means of relieving pain and preventing suppuration. (Rd.)

These lotions are used: **Aconitine**, **Atropine**, **Pilocarpine**, each in the proportion of 1 grain to the ounce. (Bt.)

When pus has formed it must be evacuated under strict antisepsis. The part must be washed with a solution of bichloride and an incision made radiating from the nipple. A director should be inserted, and any pockets of pus searched out and the walls broken through. After evacuation the abscess cavity may be irrigated with an antiseptic solution, such as **Creolin** 2 per cent., or **Hydrogen Peroxide** pure, or a weak solution of **Bichloride of Mercury**. After irrigation aseptic gauze with gentle pressure should be applied. (Am.)

Strapping:—Equal pressure applied by means of straps of adhesive plaster will prove of great benefit in old cases. If there are sinuses first inject them with an antiseptic solution.

Ammon. Chlorid:—1 ounce, with spts. of rosemary

1 pint, kept constantly applied by means of compresses, is useful for the induration following suppurative mastitis. (Al.)

BREATH, OFFENSIVE.

The condition of the teeth, stomach, mucous membrane of the throat, nose, and lungs should receive attention.

The following used as mouth washes are of service (B.) (N.) (Sm.):

Hydrogen Peroxide, 1-7 or 8 of water.

Tr. Myrrh, $\mathfrak{z}$ i to water $\mathfrak{z}$ iii.

Potass. Chlorate, $\mathfrak{z}$ i to water $\mathfrak{z}$ iv.

Potass. Permang:—Gr. i to Rose Water.

Calc. Chlorinat.,	$\mathfrak{z}$ iii.
Aquæ,	$\mathfrak{z}$ ii.
Alcohol.,	$\mathfrak{z}$ ii.
Ol. Rosæ,	gtts. ii.

One teaspoonful in a glass of water.

Sod. Biborat.,	$\mathfrak{z}$ i.
Tr. Myrrhæ,	$\mathfrak{z}$ ss.
Glycerini,	$\mathfrak{z}$ i.
Aquæ,	$\mathfrak{z}$ iv.
Acid. Tannici,	grs. iv.
Acid. Benzoici,	grs. xlv.
Tr. Eucalypti,	$\mathfrak{z}$ ss.
Alcohol. (Absolute),	$\mathfrak{z}$ iii.
Ol. Gaulther.,	gtts. xxv.

One to two teaspoonfuls in half a glass of water. (Sm.)

Solutions of Boric or Salicylic Acid, Charcoal, Camphor and Naphthol are also used.

BROMIDROSIS AND HYPERHIDROSIS.

In the former, frequent ablutions are necessary; in the latter wash as little as is compatible with cleanliness. Applications are made in the form of powders, lotions and ointments; as a rule powders are preferable.

Powders.

Aristol:—Will restrain profuse perspiration either alone or in combination with boric acid or impure Zinc carbonate. (Sm.)

Boric Acid:—For the feet; soak the stockings in a saturated solution, allow them to dry, then wear thus impregnated with the acid. (F.)

Chloral Hydrate, ʒi , starch, ʒi , one of the best powders. (Vn.)

Calc. Chlorid.,	
Calc. Præparatæ,	
Pulv. Amyli, equal parts.	(Sm.)

β **Naphthol**, grs. xv, with Bismuth ʒi or ʒi with Boric Acid ʒss . (Sm.)

Dermatol,	20 parts.
Starch,	10 parts
Talci,	70 parts. (Sm.)

Salicylic Acid:—The fine powder, dusted over the feet and stockings, is very effective (B.); also the following combination:

Pulv. Acid. Salicylic.	
Pulv. Zinc. Carbonat. Præcipit.	
Pulv. Magnesii Ust.,	$\text{āā } \text{ʒiv}$.
Pulv. Amyli,	ʒxv .
Pulv. Talci,	ʒxx . (Vn.),

Or,

Acid. Tannici,	3i.	
Lycopodii,	3i.	(Sm.)

Tartaric Acid:—Has proved efficacious in the treatment of fetid sweating of the feet. A pinch of the powdered acid is dusted every day in the socks and between the toes, and the erosions which may exist in these places are covered with small pieces of cotton charged with boric acid ointment. (Rr.)

Lotions.

Alum, 3i-ii., Water, Oj. (Sh.)

Alcohol and Boroglyceride (50 per cent.), equal parts. (Sm.)

Boric Acid (Saturated Solution). (Ja.)

Hydrastine Muriat., grs. ii-vi., water, 3i. (F.)

Salicylic Acid, 3 per cent. solution. (Ja.)

Chromic Acid:—A 5-10 per cent. solution applied once or twice in from two to four weeks is effective in bromidrosis of the feet. The same solution is recommended by Prof. Richter, viz: Applications made every five days to the palms of the hands and to the inter-digital surfaces, taking care each time to allow the painted parts to dry thoroughly. The yellow color of the skin disappears by washing a few times, without ill effects of any kind. Any existing fissures ought to be cured, by applications of a 10 per cent. salicylated soap plaster for instance before beginning the treatment of the hyperhidrosis itself. Ten applications of the chromic acid solution are generally sufficient to effect a cure.

Sulphate of Copper, gr. i, with Hamamelis, 3i. (Sm.)

Naphthol:—5 per cent. solution in alcohol for bath-

ing the parts, or the powder of 1 per cent. with starch. (Kap.)

Hydrarg. Bichlorid., grs. x, Cologne water or tincture of Hamamelis, ʒiv . (Sh.)

Lead Acetat., ʒii-iii ., Water, Oj. (Al.)

Infus. White Oak Bark. (Kp.)

Infus. Quillaia:—As a wash for the hands and feet once daily. (Sm.)

Potass. Permang.:—Grs. i-v to water ʒi , useful for sponging the feet; afterwards dust with the powder of salicylic acid, and starch. This will often correct the condition. (Sm.)

Zinc:—The oxide, with starch. (Kp.) The oleate grs. iii, starch ʒss , or the compound stearate with boric acid. (Sm.)

Ointments.

These are not as a rule suited for use on the hands or feet, powders and lotions being preferable; in obstinate cases, however, they may be used with benefit.

Ung. Hydrarg. Oleat.:—10 per cent., for the axillæ, the skin being previously washed with alcohol. (N.)

Alumini Oleat.:—Diluted one-half with lard or some other fatty substance, forms the ointment of the oleate of aluminum which is very effective. (Sm.)

Ung. Picis:—Equal parts, with Ung. Sulphur. (Vn.)

Hebra's treatment:—For obstinate and severe forms of sweating of the soles of the feet and the hands; take equal parts of olive oil and diachylon ointment, melt the ointment, and add the oil, stirring until a homogeneous mass results, cut pieces of muslin the size of the part, and spread on the ointment thickly,

and apply. Lint spread with the ointment should also be placed between the toes or fingers and a roller bandage firmly applied over all. These dressings should be changed twice in twenty-four hours, and the parts rubbed dry with lint and starch powder without washing. This treatment should be continued from one to several weeks, according to the severity of the disease. After the discontinuance of the ointment the powder should be applied for several weeks. (Vn.)

Pilocarpine:—Small doses hypodermically have proved beneficial. (Sm.)

Sea Baths or Salt Baths are sometimes of service. **Carbolic, Juniper Tar, Eucalyptus and Ichthyol Soaps.**

Disinfection of the shoes is an indispensable precaution, to the prevent recurrence of the bromidrosis. This is done by pouring a mixture of one tablespoonful of commercial formalin to one litre of water, or a 3 per cent. solution of carbolic acid, into the shoe; the liquid is left for a few hours, after which it can be dried rapidly. (Br.)

BRONCHITIS.

ACUTE BRONCHITIS:

The patient should be propped well in bed, as position influences stasis of the blood in the lungs. (Rd.)

Sinapisms, or Turpentine Embrocations:—Applied to the anterior surface of the chest will relieve cough and oppression. (Ty.)

Lin. Camphor. Comp.:—Systematically and thoroughly applied with massage, is said to be very help-

ful in relieving the sense of constriction and uneasiness. (T. 97.)

Vini Ipecac.:—Diluted with twice its bulk of water sprayed into the throat night and morning for about ten minutes, the patient expectorating the liquid as it accumulates, is recommended to relieve distressing cough, labored breathing and sense of constriction. (T. 97.)

Inhalations of the vapor of a saturated solution of **Ammon. Chloride** or **Tr. Benzoin. Comp.** poured on the surface of hot water are useful palliatives when there is decided oppression. (Ty.)

Cresolene:—A remedy by this name, sold with a small lamp, is extensively advertised and is often a very effective palliative; some of the fluid may be poured into a receiver and placed over the lamp, the fumes, which are strongly impregnated with carbolic acid, may be inhaled as long as they appear to afford relief.

CAPILLARY BRONCHITIS:

Counter-irritation by sinapisms, or **Turpentine**, is especially useful. The former may be made with about 1 part to 5 or 6 of flaxseed meal, and, if the white of one egg and glycerine is used instead of water, it may be kept applied much longer. **Turpentine** may be applied in the combination known as **St. John Long Liniment**, which consists of a tea cup of vinegar and a wineglassful of turpentine beaten up with one egg. Rub on the chest and apply with flannel. This is said to be the most effective way in which to apply turpentine. (Ty.)

Poultices:—These are now generally condemned on account of their weight and the exposure in chang-

ing. They are, however, recommended by some writers for capillary bronchitis in children.

CHRONIC BRONCHITIS:

The inhalation of medicated vapors is often employed with satisfactory results. The remedies are thus used:

Tr. Benzoin Comp.,	ʒi.
Aq. Bullientis,	Oj.
Inhale vapor night and morning. (Sm.)	
Acidi. Carbolic,	gtts. iii-vi.
Aq. Bullientis,	Oss. (Al.)

Iodine:—Combined with turpentine as follows, form an excellent mixture, non-irritating to the mucous membrane: Iodine 10 parts, alcohol 20 parts, mix in a flask, and add essence of terebinth 20 parts, and spirits of lavender 10 parts. Shake the mixture well. It will be found useful when expectoration is profuse and fetid. (Sm.)

Ethyl Iodide:—10–30 minims will afford marked relief to the cough, and is the most direct method of introducing iodine into the system. (Sm.)

Terebene:—5–40 drops to 1 ounce of water with 20 grains of carbonate of magnesia; a teaspoonful of the mixture is added to a pint of water at a temperature of 140°, and the vapor inhaled for ten minutes night and morning. (Al.)

Turpentine:—5 minims of the oil to a pint of water at 150°. (Al.)

Creosote:—5–6 minims with a little carbonate of magnesia added to a pint of hot water forms an inhalation which is indicated when there is dilatation of the bronchi and retention of mucus. (Al.)

Sulphurous Acid:—In sprays, or “**Pictet Liquid**,” the combination of sulphurous acid and carbonic acid gas liquified by pressure of three atmospheres and stored in syphons is a very powerful agent and must be inhaled with great caution. Carpets, furniture, hangings, bedding, etc., must be removed and nothing left in the room but a chair and a table. The slightest pressure on the valve of the syphon will permit the escape of the gas in minute quantities until the desired amount is obtained, the patient being the best judge. A peculiar brassy taste with a slight sense of constriction of the throat and a little cough and feeling of oppression are the effects to be obtained and kept up for an hour or two. It is claimed that if administered with due caution excellent results are to be expected. (B.)

For inhalation when the expectoration is very fetid:

Acid. Carbolicæ,	grs. ii-iv.
Ol. Eucalypti,	M ii-iv.
Aquæ,	℥i (An)

To be inhaled from a steam or hand atomizer three or four times a day.

Olive Oil Inunctions to the chest are often soothing and strengthening. (Rd.)

BRONCHIECTASIS.

Antiseptic sprays and inhalations, as mentioned in the previous article and in the articles on Pulmonary Tuberculosis, are applicable.

BUBO.

Preventive Treatment.

When suffering from gonorrhœa, chancroid or any lesion liable to cause bubo the patient should avoid physical exertion as much as possible.

Cleansing and Dressing of Venereal Ulcerations:—All sores should be thoroughly cleansed. As sprays penetrate more deeply and irritate less than washes, antiseptic lotions are better applied that way. Solutions of **Carbolic Acid** 1–100, **Hydrogen Peroxide** half strength, and **Nitrate of Silver** 1–100 in normal saline solutions, are suitable antiseptics. The lesions may first be sprayed with the peroxide, then with one of the other solutions.

If there is much secretion **Black Wash**, or some other wet dressing may be applied and renewed after each urination. If the discharge is not copious dusting powders are preferable, viz: **Acetanilid**, **Airol**, **Iodoform**, etc. When drainage is impossible on account of a contracted and elongated foreskin circumcision should be performed. (T. 97.)

Abortive Treatment.

When inflammation has commenced **Rest** in bed and **Cold Applications** are of great importance. (Cl.)

Collodion:—Painted on the part causes contraction and pressure, and is especially serviceable when it is impracticable for the patient to remain quiet. (Cl.)

Pressure:—A ball of cotton as large as a man's fist is placed over the gland, and bound down by a firmly applied spica bandage. A few safety pins are placed

in the bandage through the ball to prevent slipping. This simple measure is often very successful. (T. 97.)

Phytolacca Dec.:—The tincture or fld. ext. on cotton. (Rd.)

Nitrate of Silver:—A 2 per cent. solution injected in the early stages. **Carbolic Acid**:—A 2 per cent. solution by injection. (F.)

The following other measures have been suggested, some of which are better adapted to hospital practice:

If the bubo is seen within the first twenty-four or forty-eight hours of its becoming painful, the following may be tried to prevent extension: Place the patient in bed after a saline purge and apply over the bubo a compress consisting of eight or ten layers of gauze soaked in dilute solution of acetate of lead, and a spica bandage over this. The compress should be kept wet with the lead solution for twenty-four hours; if there is no improvement at the end of that time the bubo should be dissected out and the incision closed without drainage. To accomplish this successfully all suppurative lesions of the penis must be thoroughly cleansed and the organ enclosed in an antiseptic dressing. The skin over the bubo must be prepared as if for a major operation. (T. 97.)

Mercury Benzoate:—Hypodermic injections of this salt at one or two points were used for the treatment of threatened suppuration in thirty-three cases, thirty of which were successful. The amount injected was $7\frac{1}{2}$ minims of a fluid composed of a 1 per cent. solution of mercury benzoate and a $\frac{1}{2}$ per cent. solution of sodium chloride. It is claimed that any mercurial salt would accomplish the same purpose. The sodium chloride is necessary for the solution of the benzoate of mercury. (Sm.)

When Suppurating.

The following **Method of Fontau** is recommended as most effective for suppurating bubos, reports of which give very favorable results. This is described by Otis as follows: The skin for some eight or ten inches about the part is scrubbed with green soap, washed with ether, and then with bichloride 1-1000. A narrow bistoury is then inserted into the abscess cavity, the contents of which are gently expressed. The cavity is then irrigated with the bichloride 1-1000, and at once filled to moderate distension with warm iodoform ointment (10 per cent. iodoform, 90 per cent. vaseline). Caution should be exercised not to use too much heat in warming the ointment lest the iodine be liberated. An ordinary cone pointed glass syringe may be used for the introduction of the ointment; the plunger is removed and the barrel warmed and filled by means of a spatula. Immediately on withdrawing the syringe a compress wet with a cold bichloride solution is applied and the melted ointment instantly solidifies at the orifice and its escape is prevented from the cavity. A large compress of sterilized gauze is then applied by means of a firm spica bandage. The patient should report at the end of four days, when, if all is well, the dressing is reapplied, but if there is any evidence of inflammation the wound is thoroughly irrigated, cleansed and the injection repeated. The advantages of this procedure are: 1. Simplicity and safety; 2. Rapid cure; 3. The patient can go about when under treatment; 4. The first gland being rendered aseptic others are less likely to become affected; 5. No scar; 6. Does not interfere with another surgical procedure should any be necessary subsequently.

The method is only applicable when there is infection by the staphylococcus and when there is an appreciable pus cavity. In diffuse phlegmon with no pus cavity the treatment has not been found available. (J. C. G., 5, 93.)

Excision:—The following plan has been employed with success: The overlying skin is prepared in the usual manner as for a capital operation. The inflamed gland is cut down upon, dissected out and removed and all the surrounding necrotic tissue must be removed by a sharp curette, the removal of this tissue must be as thorough as possible. The cavity is then irrigated with hot sterilized water and packed for a few moments with hot moist sterile gauze to remove loose débris and check oozing. All suspiciously necrotic looking skin is removed; the gauze pack is then taken out and the whole cavity is packed full with powdered boric acid; the incision is then closed with interrupted sutures. No drainage is required except in neglected cases. When the cavity is the size of a duck's egg, the surface about the incision is dusted with boric acid and very firm pressure applied by means of a well-adjusted compress of sterilized gauze; over this a spica. Cure may be expected in from four to eleven days. (T. 97.) Another method of treatment consists in incisions as described in the treatment of Fontau, and the introduction of a piece of Carbolized or Iodoform Gauze through the incision, and allowing the pus to drain off. If after evacuation the skin over the cavity becomes sunken and shriveled it should be removed and the bubo treated like an ulcer as the conditions indicate. (Cl.)

Xeroform:—After a preliminary cauterization with carbolic acid, applied as a powder will promote healing, and lessen suppuration. (F.)

Silica Hydrate:—Pack the bubo with the remedy, renewing it once or twice a day. It will check suppuration very quickly, but should not be used too long as it devitalizes the tissues, and leads to extensive sloughing. (F.)

Ammon. Chloride:— $\text{zii}-\text{ʒi}$ in hot water useful for indolent types. (Al.)

Sanoform:—Less effective than iodoform but gives good results when used as a substitute. It has the advantage of being free from odor. (F.)

Nitrate of Silver:—The crayon lightly applied to the surface of indolent bubos and to the cavities of sinuses is useful for stimulation. A solution of $\text{ʒi}-\text{ʒi}$ followed by iodoform gauze packing may be employed for the same purpose. (Al.)

Hot Fomentations:—When suppuration is inevitable, to hasten maturation. (Cl.)

BUNION.

In recent cases, the sac being thin, it may be ruptured by pressure, the contents evacuated and the condition corrected. In time the cyst becomes thickened and this proceeding will be no longer effective. In this case the direction of the toe must be changed by wearing properly shaped boots made with the inner side of the sole straight from the toe to the heel. (Rd.)

If the bunion is discharging use stimulating applications; if there is inflammation, poultices and soothing remedies.

Warm Foot Baths:—Very serviceable for the relief of irritation of the part. (Rd.)

Lotions of **Tr. Arnica**, gtts. xx- $\bar{3}$ ss, or **Tr. Ruta**, (mother tincture) same strength when there is any tendency to erysipelas, after foot-baths. (Rd.)
Verat. Vir.:—Equal parts of the tincture with spirits of wine and water when there is much inflammation. (C.)
Copper Oleate:—A 10-20 per cent. ointment spread on as a plaster will often relieve. (Sm.)

Calendula:—1 part of the succus to 10 of water when suppurating. **Tr. Iodine** and **Tr. Belladonna**, equal parts, apply twice daily.

Poultices are indicated when pus has formed. (Rd.)

BURNS AND SCALDS.

Whatever form of dressing is employed any degree of pressure to the burned surfaces must be avoided. If the posterior surfaces of the body or limbs are involved the patient must lie prone. (W.)

Carbolic Acid:—This is one of the first remedies; it is used mixed with olive oil. A piece of lint being soaked in the carbolized oil is applied directly to the wound. It is recommended in the proportion of 1 part of the acid to 50 of olive oil (W.) and in much stronger mixtures, such as 1 part to 12. (Ga.) The following are useful formulæ for its adaptation:

Acid. Carbolic,	$\bar{3}$ iss.
Glycerini,	$\bar{3}$ ss.
Aq. Destill.,	Ad. $\bar{3}$ vi. (Rd.)

Or,

Acid. Carbolic,	grs. viii.
Vaselini,	$\bar{3}$ ii.
Spread on lint.	(Bellevue Hospital.)

Acid. Carbolici,

grs. xv.

Liq. Calcis,

Ol. Lini,

āā ℥ii.

Wring out cloths saturated in the mixture and apply. (City Hospital.)

Picric Acid:—A simple and satisfactory remedy for superficial burns and scalds. A solution is made as follows: Picric Acid, ℥iss., alcohol, ℥iii; allow the acid to dissolve, then add two pints of distilled water. The burned surfaces should be cleansed with absorbent cotton dipped in the solution and the blisters pricked; care should be taken not to destroy the epithelial surfaces; strips of sterilized gauze are soaked in the solution and applied so as to cover the entire injured surface, and the whole kept in place by a bandage. The dressing, which soon dries, is left in place for three or four days; it is then removed by saturating with the picric acid solution. The second dressing is applied as the first and left on for a week. The advantages of this treatment are that it seems to relieve the pain, and limits the tendency to suppuration by coagulating the albuminous exudations. Healing takes place under a scab, and a smoother and more supple cicatrix results than by other methods. (T. 97.) Solution of other strengths are also employed, as 1–200, which is described as antiseptic, analgesic and keratogenous, and free from accidents provoked by other antiseptics. Saturated solutions are also recommended. (Sj.)

Carbonate of Lead:—Used either pure or worked up with oil to the consistency of cream; it should not, however, be applied to large surfaces for fear of toxic effects. This remedy was favorably regarded by the late Dr. Gross. (Al.)

Sodium Carbonate:—Saturated solutions for the relief of pain. (B.)

Carron Oil:—Made by mixing equal parts of lime water and linseed oil is an old and well-tried remedy; it was used carbolized by Dr. Gross. (T. 96)

Flour:—Dusted on thickly, or flour and lard worked up together (Ga.)

Airol:—A dusting powder rapid in effect and unirritating. (Sj.)

Guaiacol:—Interstitial injections of a 1–10 or a 1–20 solution, a Pravaz syringeful, affords relief. The action is slower, but more lasting than that of cocaine. (Sj.)

Nutgalls:—1 part of the powder and 8 parts of borated vaseline for diminishing over-abundant suppuration, and as a deodorant. (Sj.)

Thiol:—An excellent remedy in burns of all degrees; it is employed with occlusive dressings. After dusting with boric acid the entire surface may be painted with a solution of equal parts of thiol and water and oiled cotton cloths laid on over the burn. (Sj.)

For burns of the first degree, the following powder:

Zinc Oxide,	5 parts.
Magnesium Carbonate,	10 parts.
Ichthyol,	1 to 2 parts.

For burns of the second degree:

Zinc Oxide,	5 parts.
Prepared Chalk.	10 parts.
Starch,	10 parts.
Linseed Oil,	10 parts.
Lime Water,	10 parts.
Ichthyol,	1 to 3 parts.

Both the powders and paste are renewed daily;

when inflammation is intense the two may be employed simultaneously, the burn being covered with a layer of the powder, and the paste applied over this. (T 97.)

Ichthyol:—In burns of the first and second degree, as long as the blisters are small and intact, strong solutions have been found of great benefit in relieving pain and congestion, and when applied early will sometimes even prevent the formation of blisters. If, however, the surface is eroded strong solution will cause irritation and inflammation. (F.) Equal parts with water have been used as soon as the denuded skin is removed and some of the inflammation has subsided. A 25 per cent. ointment kept continuously applied is also employed. (T. 97.)

Potass. Nitrate:—A few teaspoonfuls in a basin of water give excellent results in the treatment of burns of all degrees. It acts as a refrigerant; as it dissolves it lowers the temperature of the water from 5° to 9°. If a burned hand or foot is plunged in such a solution speedy relief will be obtained. When the water becomes warm the pain returns, then more of the salt must be added. Baths of this solution may be prolonged three to four days. Compresses may also be effectively applied. The formation of blisters is in a measure prevented, and cicatrization takes place rapidly. (T. 97.)

Turpentine:—The liniment is an old and well known remedy; it may be applied as soon as possible after the accident. The burned surfaces are dressed with cotton and gauze saturated with the liniment and so applied as to exclude the air, care being observed not to include the uninjured skin. (Rd.)

The injured parts may be brushed with turpentine, and an ointment of turpentine and basilicon applied. This constitutes one of the most successful methods of treatment. (F.)

Creolin:—Gauze soaked in a 2 per cent. solution. (Sj.)

Eucalyptus Oil:— $\text{zss-j-}\overline{\text{zi}}$ of cosmoline. (Al.) **Diaphthorin:**— $\frac{1}{2}$ —1 per cent. solution. (Sm.) **Chloral Hydrate:**—5 per cent. solution, antiseptic and sedative. (Al.)

Aristol:—Valuable; quickly relieves pain. (Sj.) This substance tends to form a ~~thick~~ crust over an ulcerating surface, and should therefore be watched lest secretions and discharges be retained. It is better suited to superficial lesions.

Lanolin,	1 part.
Lard,	2 parts.
Lime Water,	3 parts.
(M. R., 3, 10, '96.)	

Continuous Warm Bath:—This is advised by Hebra in cases of extensive burns. He employed a bath-tub six feet long and three feet broad, in the interior of which an iron frame was fitted, and transverse bands of webbing were attached to the frame as in an ordinary bed. The frame was suspended in the bath by cords attached to each end; it was provided with a pillow and covered with a blanket; at the head of the tub, but at a higher level, was a copper boiler furnishing water at any desired temperature. This was connected with the tub by a pipe which entered at the bottom; through this the water flowed continuously, escaping by a pipe at the water level. Thus a constant flow was maintained. The temperature of the water was kept at 90° to 100°, and entirely changed

every day. A wooden frame, over which a blanket was spread was placed over the tub while the patient was in the bath. Hebra kept his patients in the baths without interruption for as long as one hundred days. (F.)

When suppuration commences, strict cleanliness and antiseptis must be rigidly enforced. The dressings must be changed as often as the condition of the ulcerating surfaces and the rise of the temperature indicate. Little balls of absorbent cotton, soaked in a solution of **Corrosive sublimate** 1-3000, should be used for cleansing. (W.)

Chloroform:—In severe cases the administration of this anæsthetic is advised at the time of dressing not only to avoid pain but to lessen shock. (T. 97.)

In the stage of granulation the following:

Balsam Oil:—This remedy, introduced by the late Dr. W. W. Van Arsdale in 1893, forms an excellent dressing for all kinds of granulating wounds, including burns, sloughing wounds and incised accumulation of pus. It is prepared by mixing 20 minims of the balsam of Peru with 1 ounce of cold pressed castor oil. For ordinary use a gauze pad may be covered with the oil, which can be distributed by using a paint brush; sufficient gauze should be used to absorb all the expected secretions, especially if the dressing is to remain on for three or four days. The whole dressing must be covered with oiled silk or rubber tissue ample enough to overlap half an inch on all sides. Layers of cotton should be applied to lend support and the whole retained in place by a bandage. (N. Y. M. J., 29, 7, 93.)

Thymol:—In the strength of 1-3000, has been added to ointments, such as those of boric acid

or zinc oxide. It is claimed under its influence sloughs separate sooner, healthy granulations are formed and cicatrization is hastened. The scars are less irritable than when carbolic acid is used. (Al.)

Boric Acid:—A very useful dressing employed in various strengths both in solution and in ointment. A method of its use is as follows: A piece of oiled silk, dipped in a saturated solution, is applied, then a piece of lint of a somewhat larger size also dipped in the solution is placed over the silk and held in place by a bandage. This was the method of Lister. A saturated solution is especially recommended for the burns from the actual cautery and the acid nitrate of mercury. (B.)

Bismuth Subnitrate:—Mixed with glycerine to the consistency of thick cream and spread on lint then covered with oiled silk or rubber. (Al.)

Salol:—In the proportion of 3 parts to 100 of lanolin, allays pain and inflammation. (Al.)

Salicylic Acid:— ʒi , olive oil ʒviii . (B.)

Iodoform:—Forms a useful dressing in the proportion of one part to eight of vaseline; apply on lint and cover with rubber protector. (W.)

Dermatol:—Especially valuable in lesions attended with profuse secretion and therefore useful in burns. (Sm.)

Copaiba:—Cotton saturated with the balsam is indicated when the granulations are pale and flat. (Al.)

Calendula:—The cerate thinned with olive oil, or the following:

Tr. Calendulæ,

Liq. Calcis.

Ol. Lini,

ʒi

āā ʒii . (Rd.)

For Burns of a Minor Character.

Cocaine:—A 4 per cent. ointment, as a protective and an anodyne. Being insoluble in fatty substances, the cocaine should first be dissolved in oleic acid and afterwards added to the ointment base in small quantities. (Al.)

Flexible Collodion:—Greatly benefits burns of the first degree by preventing contact with the air.

Sodium Bicarbonate, with **Cosmoline**, 1 drachm to the ounce. **White of Egg** mixed with **Hamamelis Oil**, 15–20 parts to the ounce. **Liquid Gutta Percha**, **Glycerite of Starch**, **Rose Water Ointment**, **Molasses**.

Lotions of **Tr. Cantharides** 1 part to 10 of water, or **Tr. Urtica Urens** 1 part to 4 of water. (C.)

Burns of the Eyelids.

For slight burns:—Finely powdered **Carron Oil**, or **Bismuth**, or **Cocaine**, in one of the following:

Cocain. Hydrochlorat.,	grs. iii.
Lanolini,	grs. v.
Vaselini,	
Aq. Destill.,	āā ʒi.

For burns of the second degree:

Cocain. Hydrochlorat.,	grs. xxiii.
Salol.,	grs. xlv.
Vaselini,	ʒvi grs. xv.

Before applying, open blister. (T. 97.)

BURSITIS.

Perfect **Rest** with slight counter-irritation, with frequent application of **Tr. Iodine** or a **Blister**, will remove the swelling in most instances. If the cyst is

large with thin walls the fluid may be withdrawn by **Aspiration**, and pressure applied with a rubber bandage, but when the walls are thick and there is evidence of lymph within the cavity, as denoted by a crackling sound, the most effective measure is **Incision**, turning out the melon seed bodies or masses of lymph, then inserting a drainage tube and applying aseptic dressings. When the walls are excessively thickened **Excision** will be necessary. (Hl.)

CANCER.

The following are intended to meet the requirements of the practitioner when an operation is refused, or to serve as palliatives in non-operative cases. The consensus of opinion is for immediate removal by the knife, not only as soon as diagnosis is made, but also in all doubtful cases.

Ulcerating surfaces should first be made as clean as the condition admits by the use of antiseptic solutions, such as **Corrosive Sublimate**, **Potassium Permanganate** or **Hydrogen Peroxide**; then some local remedy for the relief of pain and the destruction of fœtor should be applied. With this end in view the following are recommended:

Salicylic Acid:—Injections of 15 minims to 1 drachm of a 6 per cent. solution, repeated six to thirteen times, have been used with great relief. It is claimed that this is the best treatment for non-operative cases. (Sj.)

Carbolic Acid:—A mild escharotic applied directly to cancerous sores and injected beneath the affected part limits and retards the growth. The pure acid is

used for application to the ulcerating surface and a 5 per cent. solution for injection. (B.)

Iodoform:—Applied to the surface acts as an analgesic and deodorant. It may be combined with **eucalyptus** as follows:

Iodoformi,	
Ol. Eucalypti,	āā ʒi.
Vaselini,	
Paraffini,	āā ʒi. (Al.)

Lycoperdon:—Remarkable virtue is claimed for this drug as a hæmostatic, antiseptic and anodyne on cancerous ulcers. The powder of the fungus is employed. (N.)

Conium:—A hemlock poultice or lint saturated with the succus conii are useful anodynes on ulcerating surfaces. (Wa.)

Stramonium Leaves:—The following effective ointment is used at the Middlesex Hospital, London: Fresh stramonium leaves $\frac{1}{2}$ lb., lard 2 lbs.; mix the leaves (bruised) with the lard, heat gently and strain. (Sm.)

Calcium Carbide:—The cavities of the cancer are filled with the remedy and ordinary dressings applied. The action of the remedy is rapid, producing a burning sensation which lasts for an hour or two; at the end of that time pain, fetor and discharge have disappeared and a clot formed as a barrier to hæmorrhage. (F.)

Alcohol Injections:—30 parts of absolute alcohol are mixed with 70 of water; injections are made around the tumor and infiltrated glands twice a week. The quantity injected will vary with the size of the tumor, sometimes amounting to 20 Pravaz syringefuls. In order to avoid injecting into a blood

vessel the needle is inserted deep into the tissues, then unfastened from the syringe and left in place; if blood does not issue the injection is made, if it does the needle is removed and another locality punctured. Under this treatment the tumor diminishes in size and becomes less painful. The injections may occasionally cause pain and intoxication. Local or general anæsthesia may be employed. (M. T., 9, 97.)

Alcohol Compresses:—Have a good effect for arresting the bloody oozing often observed. (Al.)

Hydrastine Hydrochlorate:—An ointment of 30 grains to 1 oz. of ointment base destroys fetor.

Potass. Chlorate:—In a fine powder is used for dusting on malignant ulcerations. (Sm.)

Pyoktanin Blue:—Used in powders or solutions of 1 per cent. or in collodion 1–30, the latter is painless, easy of application and more active. (Sj.)

Citric Acid:—A saturated solution subcutaneously introduced at any point near the periphery of the cancer seems to possess an affinity for diseased structures; indurations are reduced and instant relief is said to be obtained from the smarting and tension. (Sj.)

Atropine:—Solutions locally for pain are effective. (F.)

Escharotics.

The application of these agents is limited to ulcerating cancers and to the removal of cancerous tumors in their earlier stages. The removal of cancers by this method is slow, painful and less certain to expose healthy tissue than the knife; nevertheless escharotics are sometimes used. Before application, if the skin is unbroken, a blister or strong ammonia should be applied.

Zinc Chloride:—One of the best escharotics, has the advantage of not poisoning the system and limiting its action to the point of contact. The claims for its superiority over the knife are unfounded. Its action causes intense pain, notwithstanding assertions to the contrary. Some of the methods of its use are as follows:

Conquin's Paste, a well known preparation, is made in various ways. The U. S. Dispensatory gives this formula:

Zinc. Chlor.,	ʒi.
Pulv. Amyli (Exsiccated.),	ʒii-iv.
Aquæ,	M. xxx.

Zinc Oxide or Anhydrous Sulphate of Calcium may be substituted for the Amyl. (Al.)

Mayet's Paste:—Zinc chloride 8 parts, zinc oxide 1 part, flour dried at 212° 7 parts, water 1 part; mix the zinc oxide with the flour, dissolve the zinc chloride in water and add the mixture of zinc oxide and flour; rub the paste in a mortar ten minutes. (N.)

Method of Maisonneuve:—"Cauterization en Flèches." This is applied as follows: The patient is narcotized, and if it is thought necessary a knife is passed deep into the growth; arrows of the caustic are inserted at several points which are cut close and left in. Hypodermics of morphine will to a certain extent relieve the pain, which is very severe for some hours. The skin will turn a dead white. A poultice is now applied and in a few days the mass, it is said, "shells out like a billiard ball," exposing a surface which, if healthy, will cicatrize, but if not, the treatment must be repeated. (Hl.)

Potassa Cum Creta:—By mixing with alcohol this substance is made into a paste; it may be rendered

nearly painless by the addition of morphine and is applied as a plaster; at the end of fifteen minutes the skin is carbonized and if retained a slough will be formed as thick as the plaster. A clear surface will be left which heals rapidly. (Al.)

Sulphuric Acid:—This agent is regarded as superior to other escharotics for the destruction of malignant growths. *Michel's Paste*, a form of its application, is prepared thus: 1 part by weight of some indifferent excipient and 3 parts of fuming sulphuric acid are mixed on a glass slab forming a paste, which is applied in the following manner: If the surface is unbroken it should first be blistered and the epidermis removed, after which cocaine, not exceeding one and a half grains to the ounce is applied, at the same time a hypodermic of morphine is administered. After the cocaine has taken effect, the paste is applied entirely over the tumor to the depth of about half an inch. If these precautions are taken it is claimed that no pain is experienced. After the tumor is destroyed the cavity is washed out, filled with asbestos and covered with zinc ointment. It usually takes ten to twelve days for the eschar to separate; during this time the wound should be irrigated daily. The patient should be kept on the level, otherwise the acid will gravitate to one side and a portion of the tumor will escape its action. The surrounding skin should be protected by collodion and all oozing of any fluid carefully mopped up. (Al.)

Arsenious Acid:—This agent is better adapted to epitheliomatous growths. Its application is painful and not without danger. The following are some of its preparations as an escharotic:

*"Poudre Caustique de Frère Côme ou de Rousse-
lot:"*

Acid. Arseniosi,	grs. x.
Hydrarg. Sulphid. Nig.,	ʒii.
Pulv. Carbonis Animalis,	grs. x.

The powder is mixed with mucilage at the time of applying. (Al.)

"Februre's Remedy:"

Acid. Arseniosi,	gr. ii.
Aq. Destill.,	Oi.
adde	
Ext. Conii,	ʒi.
Liq. Plumbi Subacetat.,	ʒiii.
Tr. Opii,	ʒi.

With this the cancer is washed every morning. (U. S.)

"Jusetmond's Arsenical Powder:"

Antimonii Sulphuret.,	grs. xvi.
Acid. Arseniosi,	grs. ʒi.

Melt in a crucible; when cold, reduce the mass to powder and add five parts of Extract of Opium.

"Manec's Paste:"

Acid. Arseniosi,	grs. xv.
Hydrarg. Sulphid. Nig.,	grs. lxxv.
Spong. Ustæ,	grs. xxxv.

This is made into a thick paste with a few drops of water. (Al.)

Method of Cerny and Trunecek: Arsenious acid 1 part in 75 each of ethylic alcohol and distilled water, paint the growth. In twenty-four hours it will be covered with an eschar, which after daily repetition of the painting will come off. (T. 98.)

Sodium Ethylate:—First cleanse the part with pyrozone and dry thoroughly, then anæsthetize with cocaine 10 per cent. solution, and apply the remedy full strength by means of a glass rod. This strength is

obtained by allowing the crystals to deliquesce. The following powder is then dusted thickly over the diseased surface :

Acetanilid,	3i.
Aristol,	3ii
Boric Acid,	3i.

Vaseline is then spread on sheet-wadding of sufficient size to cover the whole surface, over this absorbent cotton, and bandage. The patient is seen every second day, but only the diseased points are touched afterwards. Considerable œdema follows the first application, but it soon disappears. The ethylate is very painful and cocaine does not always relieve. It should be kept in small corked bottles, care being taken that it does not touch the cork. (T. 98.)

Alveloz:—This drug has caustic action similar to zinc chloride and has been used with asserted success. Its application is comparatively painless. The juice of the plant is preserved for transportation by the addition of salicylic acid. (F.)

CANCER OF LARYNX:

Sodium Formate:—Solutions of 5–20 grains to the ounce of water or glycerine as a spray or 2 parts with 8 of starch as an insufflating powder blown only on the ulcerated surface, have proved serviceable applications. (F.)

Carbolic Acid:—Add 20–40 drops to a pint of water with a small amount of glycerine, heat to 140° and inhale the vapor. (Al.)

The following are for use with the atomizer:

Hydrogen Peroxide.

Pyoktanin, ½ per cent. solution.

Potass. Permang., 2 per cent. solution.

Carbolized alkaline sprays as mentioned for catarrh and rhinitis.

Morphine, 2 per cent. solutions.

Cocaine, 5–10 per cent. solutions; more effective than Morphine.

Thuja, local applications have relieved.

CANCER OF THE RECTUM:

As in cancer of other localities, any treatment other than extirpation is simply palliative. Sedatives of many kinds may be administered with benefit, and when one ceases to be of service another may be tried. (Gt.)

Opium:—In some form this is one of the best remedies; in suppositories made with 3 parts of glycerine to 1 of gelatine, it acts less like a foreign body and melts more readily. Battley's sedative or black drops in starch injections and hypodermics of morphine are effective. (Gt.) In administering opium or morphine the greatest care should be taken not to give any more than absolutely necessary as it must be continued for months, and the mental state sometimes caused by it is most distressing.

Pyoktanin:—The following suppository is advised:

Pyoktanin.,	gr. i.
Pulv. Opii,	gr. $\frac{1}{12}$.
Ol. Theobromæ,	q. s. (T. 96.)

Arsenite of Copper:—A paste made by mixing the remedy with mucilage may be applied to protruding cancerous masses, an extremely rare condition. (Gt.)

CANCER OF THE UTERUS:

Curettage and the Actual Cautery:—The application of these measures followed by antiseptic dressings is

an old and effective method which has stood the test of time. The patient is anæsthetized and placed in the dorsal position, all readily removable tissues are gouged out with a large sharp curette under continuous irrigation. The hæmorrhage is stopped by packing the cavity with iodoform gauze, leaving it in place for a short time, then removing. The interior of the excavation is now cauterized with the round ball of the Paquelin cautery at a red heat, then irrigated with a solution of boric acid 1-20. Tampons saturated in a 50 per cent. solution of zinc chloride may also be used after curettage, as described under that remedy. (K. C.)

Alcohol:—When infiltration of the surrounding tissues is feared parenchymatous injections of absolute alcohol may be employed; 80 minims are administered, the injections being made at several points, but not puncturing very deeply. Usually after ten to fifteen injections the discharge lessens or disappears and the patient improves. If the growth is too near the peritoneum to permit of this procedure, alcohol in the form of baths to the part may be administered by means of a tubular speculum. (T. 97.)

Ferric Chloride:—For hæmorrhage saturate two or three pieces of lint with the chloride and place them in contact with the cervix, then tampon with dry cotton. To avoid excoriation of the vaginal mucous membrane, which occurs unless the chloride is very much diluted, add carbonate of soda in the proportion of 4 grains to the ounce of the chloride. (Al.)

Steam:—Vaporization of the uterus for cancer of the fundus has been employed for its hæmostatic, anæsthetic and caustic effects. The steam is introduced by means of a canula attached to a rubber

tube and applied for one and a half minutes; it is followed immediately by a dark colored fluid. (F.) Compare vaporization of the uterus, under Chronic Endometritis.

Chromic Acid:—This is used pure and in dilutions. An effective method, which is said to be of great benefit, consists in first irrigating the uterus and vagina with a hot salt solution and then applying the acid in the strength of 1 part acid to 3 parts of water. Care should be observed not to permit any of the caustic to come in contact with the healthy tissue, which must be protected by a saturated solution of bicarbonate of soda. Tampon with iodoform gauze after the application. (F.)

Ferripyrrin:—Being astringent as well as anæsthetic, is applicable for the control of hæmorrhage and discharge. It may be applied directly to the diseased surface or mixed with charcoal placed in little bags and introduced into the vagina. (T. 97.)

Pyoktanin:—As a dusting powder with gauze packing of the same, has improved the general condition. (Sj.) Solutions of 1–300 are injected in the infiltrated tissue, a few drops at each point, using about 30 in all, at intervals of one or two days; curettage should precede the injections and the dry powder be used in the uterus. This will prolong life. (K. C.) A medicated crayon for introduction into the cervical canal may be made as follows (T. 98.):

Pyoktanin Blue,	
Tannin,	āā grs. iv.
Powdered Opium,	gr. i.
Olive Oil,	gtts. xv.
Coca Butter,	ʒi.

The crayon may be retained by tampons.

Terebene:—Tampons soaked in a solution of 1–16 of olive oil or used pure act well as antiseptics and deodorants. (F.)

Pepsin:—Good results have followed its application to cancer of the cervix; much of the neoplastic tissue may be destroyed this way. (Sm.)

Salicylic Acid:—Parenchymatous injection of a 6 per cent. solution in alcohol has been employed with satisfactory results. (Sj.) A tampon thoroughly impregnated with the drug may be inserted twice a day to correct fœtor, in conjunction with vaginal douches of a 3 per cent. solution of creolin. (Al.)

Zinc Chloride:—This remedy may be employed after curettage and the actual cautery. Czerny used 4 parts of the chloride with 1 of zinc oxide and 3 of flour enclosed in gauze secured with a tampon by a string attached for easy removal. This was allowed to remain about six hours, or less if there seemed any risk to the vesical or rectal septum. On its removal, iodoform gauze was inserted. (N.)

Another method after curettage and the actual cautery consists in packing the crater of the cancer with pledgets of absorbent cotton the size of a walnut which had been soaked in a 50 per cent. solution of the chloride and a non-absorbent cotton tampon is applied over these. The zinc chloride produces a still further separation of the cancerous tissues, and in about a week or ten days the slough may be removed. In case there is hæmorrhage after the separation of the slough the cavity may be packed with iodoform gauze. Solutions of bicarbonate of soda should be employed to neutralize any of the chloride which may come in contact with the vagina. (K. C.)

Bismuth Subnitrate, mixed with **Aristol** or **Iodo-**

form, may be dusted on the interior of the cavity when curettage is not practicable on account of the disease being too far advanced. (K. C.)

Carburet of Lime:—A piece the size of a small walnut is placed in contact with the diseased part and the vagina quickly filled with iodoform gauze, which is removed in a few days and an antiseptic douche administered. (T. 97.) This remedy has been used in France with favorable results. The calcium carburet decomposes into calcium oxide and acetylene gas; at the end of several days the oxide is easily removed by an antiseptic douche (corrosive sublimate). The diseased part becomes grayish and smooth, and the pain and hæmorrhage are suppressed. (F.)

Salol Gauze:—May be used with good effect for packing after the curette and cautery. (T. 98.)

Tampons heavily loaded with equal parts of **Benzoin**, **Iodoform** and **Magnesia** may be used in place of injections. (T. 98.)

Sodium Chlorate:—This remedy is advised internally and locally as a palliative. Locally:

Sodium.

Subnitrate of Bismuth,

Iodoform,

āā ʒiiss.

ʒi.

A small quantity is applied by a tampon to the cervix.

Strips of sterilized gauze six inches long and two wide impregnated with 1 part of iodoform, 20 parts of sodium chlorate and 20 parts of glycerine may also be used. If symptoms of iodoform poisoning appear, tampons of salolized cotton saturated in a 20 per cent. solution of chlorate of sodium should be substituted. Finally a vaginal douche of a quart of sterilized water holding in solution 150 grains of chlorate of sodium should be administered daily. (T. 98.)

Nitric Acid:—Recommended as an effective caustic: the acid is applied to the whole diseased surface and a pad saturated with glycerine placed over it. This treatment produces a slight slough and destroys many of the sources of hæmorrhage. It may be used every two or three months. (Al.)

Hydrastis and Sanguinaria:—For epitheliomatous ulcerations of the cervix, equal parts of each in powder have been employed with good effect.

For the control of hæmorrhage use the following: **Tr. Iodine** (Churchill's), **Persulphate of Iron** in glycerine on pledgets of cotton, strong solutions of **Alum** and **Packing the Vagina**, the latter should be employed when the hæmorrhage is alarming; the tampon should be made of antiseptic cotton with a string attached to each to facilitate removal. (Cp.)

Hot Water Douches:—These are valuable for the relief of pain and the control of hæmorrhage, but especially for cleansing.

Antiseptic Douches:

Carbolic Acid,	grs. viii.
Glycerine,	℥ viii.
Ess. Thyme,	℥ iii.
A teaspoonful to one or two quarts of water.	
Salicylic Acid,	grs. xv.
Ess. Geran. Ros.,	℥ i-grs. xv.
Alcohol, 90 per cent.,	℥ vi.
A tablespoonful to a pint of water. (T-98.)	

The following are for vaginal injection in the proportion of the amount mentioned to one pint of water:

Acidum Carbolicum, ℥ss-i.
Acidum Gallicum, grs. xx-℥i.

Acidum Tannicum, grs. xx- zi .
Acidum Salicylicum, zi .
Alumin, zi -iv.
Aqua Chlorini, ziv .
Creosotum, Mx- zss .
Cupri Sulphas, grs. x-xxx.
Ferri Sulphas, grs. xxx.
Kino, zi .
Krameria, zss .
Liquor Ferri Sulphatis, zii -iv.
Liquor Plumbi Subacetatis, zi -ii.
Liquor Sodæ Chlorinatæ, zi .
Plumbi Acetas, grs. x-xx.
Potassii Chloras, zi .
Potassii Permanganas, grs. xx.
Quercus Alba, zss .
Sodii Hyposulphis, zi -ii.
Tr. Ferri Chloridi, zss -i.
Zinci Chloridum, grs. v-vii.
Zinci Sulphas, zi -ii. (Dn.)

CANCRUM ORIS.

Cauterization is indicated first and should be immediately applied with care and thoroughness to every portion of the diseased area. The Paquelin or the Electro-cautery are the best methods, as they can be more easily controlled. The resulting eschar should be dressed with warm boric acid solutions until it separates; then with astringent lotions. (Mus.)

Other energetic caustics are Nitric Acid, Hydrochloric Acid, Bromine, Vienna Paste and Zinc Chloride. The after treatment should include direct

applications of Iodoform, Pyoktanin Blue, Ichthyol and Carbolic Acid. (Gn.)

Subcutaneous injection of Pyoktanin Blue in a saturated solution promises much, according to Goodno.

Potass. Permang., 1-100; Formalin, 1-15 or 30; Tr. Iodine, Fld. Ext. Eucalyptus, pure or with equal parts of glycerine, are recommended for use after the removal of the slough. (Jac.)

CARBUNCLE.

(Compare Abscess.)

Carbolic Acid:—This effective remedy is employed in several ways. A successful method of its application is as follows (Dr. M. O. Terry): First, apply several layers of collodion over the carbuncle extending beyond the periphery of inflammation, but leaving an uncovered area in the centre of about one-quarter of an inch. Second, make a small crucial opening. Third, inject the following: Crystals of carbolic acid, 20 grains; glycerine and water, each 2 drachms. The injections should be made with a hypodermic syringe to which a lachrymal canula is attached; push the canula well toward the periphery, injecting a few drops in several directions. Repeat daily if necessary. As a rule, not more than five injections will be required. Simple dressing of vaseline and calendula and iodoform may then be applied. (Hel.) Injections of 5-10 minims of a 2 per cent. solution (F.) or 5 drops of the pure acid at each point of the carbuncle are said to arrest the development. (T. 97.)

Non-Incision Treatment:—The following formula is highly praised by Dr. L. D. Bulkley for carbuncles as well as boils:

Acid. Carbolic,	grs. v-x.
Fld. Ex. Ergotæ,	ʒ i-ii.
Pulv. Amyli.,	
Zinc. Oxidi,	āā ʒ ii.
Ung. Aq. Rosæ.	

Spread thickly on lint and apply. It is claimed that incision has seldom been necessary with this treatment, and that better results are obtained than with the knife, except in more malignant cases with gangrene. Bulkley adds: "I have applied this treatment to some large and formidable carbuncles, and have always found that the pus would find exit readily enough and healing progress satisfactorily under this dressing. On some occasions febrile and other symptoms have seemed to call for more active interference with the knife; but although urged to do it, I have adhered to the plan of treatment without incision, and have obtained results which have warranted its continued employment. I am prepared to admit, however, that possibly from neglect or other causes a very large suppurating carbunculous area might be formed, which would demand active surgical procedure. I may add that Sir James Paget (Clinical Lecturer and Essayist) strongly discountenances the practice of incision." (Bk.)

Excision and Erasion:—This procedure is indicated when it is not possible to isolate the disease from the surrounding tissues. Remove as much as possible with the knife, scissors and Volkmann's spoon, and swab the raw surface with a solution of chloride of zinc, grs. xl-ʒi. A large circular wound will be left,

which is painted with carbolic acid, alcohol, methyl violet, each part, water 10 parts, then dust with iodoform and pack with iodoform gauze. The incision should be made deep around the circumference, at least half an inch from the infected part. Hæmorrhage may be guarded against by pressure forceps in the hands of an assistant. After excision great care must be taken not to infect the wound. (T. 97).

Crucial Incision with Carbolic Acid Injections:—When excision is impracticable multiple crucial incisions may be made across the surface of the carbuncle; then inject hypodermically carbolic acid 1–10. The injections should be made carefully, so as to diffuse the solution throughout the base of the infected part, and the puncture must be made deep, drawing the needle slowly while injecting a few drops. The incision must be carefully mopped out with the acid; then compresses wet with a solution of bichloride, 1–1000 applied, and an ice bag over the dressing. The injections are to be repeated every six hours until the disease is under control. (A.)

Crocker recommended **Glycerine of Belladonna** spread on lint, followed later by **Ung. Resinæ** until suppuration occurred; then the removal of the sloughs with the scissors when they are slow in separating, or when septic absorption is threatened. The wound is dressed antiseptically. (Hd.)

Iodine Liniment:—Painted freely on the part, followed by the application of a thick pad kept in place by an elastic bandage is recommended. When the carbuncle is situated on the limb it is claimed that relief is very marked, and that the patient can be permitted to go about. (T. 97.)

Antiseptic Irrigating solutions (see also Abscess).

Hydrarg. Bichlorid., 1-2000 or 1-3000.

Potass. Permang., grs. x- $\bar{z}$ i.

Hydrogen Peroxide.

Dusting powders are indicated during the process of healing. Acetanilid, Airol, Dermatol, Iodoform, Pyoktanin Blue, 1-2 per cent., Resorcin, etc.

CARIES AND NECROSIS OF BONE.

Iodoform:—1 part to 10 of glycerine was used by Billroth in tuberculous caries, viz: The abscess was first opened, the bone scraped, the cavity thoroughly cleansed and firmly rubbed with a pledget of iodoform gauze. The wound was then stitched up, leaving an opening in which the iodoform emulsion was poured. Recovery by first intention may be expected. Usually a second dressing will be required. (Sm.)

Myrrh:—When the discharge is very offensive this will form a useful stimulating dressing. It may be combined with potassium chlorate in the proportion of 2 drachms of each to 4 ounces of distilled water. (Al.)

Turpentine:—Diluted with olive or almond oil is of especial value in caries of the temporal bone. Applications may be made every 3 or 4 days. (Al.)

Potass. Permang.:—Grs. iii-x- $\bar{z}$ i, applied with a brush or compress. (F.)

Liqueur de Villate:

Cupri Sulph.,

Zinci Sulph.,

Liq. Plumbi Subacetat.,

Acid. Acetici Dilut.,

ãã grs. xv.

3 ss.

3iiss.

A small quantity is injected into the sinus. It is claimed that only the outer portion of the bone becomes decalcified.

Acidulated Pepsin:—An artificial digestive fluid has been employed for the removal of dead bone from suppurating tracts. It is employed as follows: An opening is made in the soft parts by the most direct route to the diseased bone, then, if possible, the sinuses are made to connect and are kept patulous by plugs of antiseptic gauze. A 3 per cent. solution of hydrochloric acid is then injected. This may be done every two hours if the patient is confined to bed; if not, once daily. After decalcification of the exposed bone flush the sinus with hydrogen peroxide or bichloride of mercury, 1-2000, and inject the following:

Pepsin.,	3ss.
Acid, Hydrochloric.,	Mxvi.
Aq. Destill.,	3 iv.

Digestion of the bone and tissue detritus will take place in about 2 hours. The procedure may be repeated in two days. (A1.)

Lactic Acid:—The concentrated acid has been used on lint or absorbent cotton covered with an impermeable tissue and bandaged in cases of fungous caries. The healthy skin should be protected with adhesive plaster; after twelve hours remove the caustic, cleanse the part and apply moist dressings for twelve to twenty-four hours. The acid may be repeated as often as necessary. (F.)

Nitric Acid:—As a caustic to hasten suppuration, especially when there is sloughing of the soft parts. (N.)

Sulphuric Acid:—A swab on an aluminum applicator may be applied to the necrosed bone, especially

when exfoliation is slow. The effect is solvent and cauterant, and tends to the removal of diseased part. (F.)

Hydrochloric Acid:—The dilute acid has been used as an injection in tuberculous caries.

The pure acid has also been employed, a few drops being applied directly by means of a glass pipette to the diseased bone and allowed to remain on for one minute; afterwards irrigate with a saturated solution of carbonate of soda and apply myrrh dressings. (F.)

Operation:—When possible, is generally preferred to any other method.

CARIES OF TEETH.

Gum Mastiche:—Often employed as a temporary filling, in solution with ether, 1-4; a small piece of cotton being saturated with the solution is pressed down into the cavity, which should be previously cleansed. (Al.)

Myrrh:—Serviceable as a mouth wash, viz:

Potass. Chlorat.,	ʒ ii.	
Tr. Myrrh.,	ʒ ii.	
Aq. Destill.,	q. s. ad. ʒ vi.	(Al.)

Hydronaphthol:—As a mouth wash and preventive of dental caries, viz:

Hydronaphthol.,	grs. xvi.
Alcohol.,	ʒ i.
Aq. Destill.,	ʒ i.

A tablespoonful to half a pint of water. Use freely.

It should be made in small quantities, since the preparation is unstable. (Al.)

Creosote Collodion:—Recommended as an application to the cavities of carious teeth. (F.)

Ethyl Chloride:—This agent may be used as a dental anæsthetic, viz: First, thoroughly dry the gum and cover it with vaseline, and protect the neighboring parts with wool. The patient should be instructed to breathe through the nose. The chloride may be applied to both sides of the tooth, freezing the parts. In extraction it is not necessary to spray on both sides of the tooth, the jet may be thrown near the entrance of the dental nerve in front of the ear for the upper; and behind the ramus of the inferior maxilla for the lower jaw. Anæsthesia of the whole jaw, it is claimed, will follow, and a tooth may be extracted without pain. During the thawing, care must be observed in the use of hot water, if used too hot or too soon sloughing will follow. (F.)

CELLULITIS.

(See Phlegmonous Erysipelas.)

CERUMEN.—INSPISSATED AND IMPACTED.

Vaseline, Olive Oil, or Glycerine:—The latter the most effective warmed and dropped into the ear and retained by pledgets of cotton, are useful for softening the wax before syringing. The oil and glycerine should be allowed to remain twenty-four hours. (Bp.)

Sodium Bicarbonate:—Grs. iv- $\bar{z}$ i, with warm water or glycerine; fill the ear several times a day with the solution; allow it to remain for about fifteen minutes, the mass will then break up and can be easily removed by injection. The auditory canal should afterwards be dried, anointed with vaseline, and protected with cotton. (Bp.)

Papain:—Grs. xx- $\bar{z}$ i. **Liquor Potassæ:**—10 per cent. solution. **Hydrogen Peroxide:**—Full strength, are also useful for the removal of inspissated cerumen. (Al.)

CHAFING.

(See Erythema Intertrigo).

CHANCER HARD.

Strict Cleanliness is of great importance. The part should be bathed frequently in tepid water or some antiseptic lotion. Usually simple dressings in the form of dusting powder are effective in healing the local sore. Iodoform formerly headed the list, but some of the odorless dusting powders may be substituted, such as Aristol, Europhen or Bismuth Subnitrate. Sometimes a simple piece of lint laid on the erosion will be all that is necessary. (Cl.)

Calomel:—Used as a dry dressing with equal parts of zinc oxide. (B. H.)

Hydrogen Peroxide:—Wash the part three times a day in the pure peroxide and apply lint soaked in the same. (R.)

Lotio Nigra and **Lotio Flava:**—Old but none the

less effective remedies, especially for indolent sores. (N.)

Ung. Hydrarg.—If there is much induration the officinal ointment may be used, protecting the surrounding part by proper dressings. Or if this is too irritating the following :

Hydrarg. Præcipit. Alb.,	grs. xl.
Adipis Benzoat.,	ʒi.

Or,

Ung. Hydrarg.,	
Zinc. Oxidi,	
Amyli,	āā ʒ ii.
Adipis Benzoat.,	ʒi. (B. H.)

The weight of evidence is strongly against the utility of excision and cauterization, as well as the effectiveness of antiseptic lotions and local applications of mercury as preventives or abortives of constitutional symptoms. (Cl.)

If the chancre does not heal but presents an extensive ulcerating surface, or appears to be of the mixed variety, the same treatment as for chancroid will be indicated.

CHANCROID.

It has long been the custom with many surgeons to cauterize all chancroids; but modern antisepsis has modified this routine treatment. In a large majority of cases daily irrigation with a solution of **Corrosive Sublimate**, 1–500 or 1–1000, followed by the free application of **Iodoform**, or an ointment of the same, in the strength of 90 grs. to vaseline 1 oz., will be fol-

lowed by cicatrization. If this fails, pledgets of lint soaked in a **Boric Acid** solution or in **Peroxide of Hydrogen** kept continuously applied will often result in a cure. Should, however, these measures in turn prove unsuccessful and the sore deepen and extend, it should be cauterized. (A.)

Cauterization :—This is recommended by not a few authorities as the first remedial measure; but others limit its application to those cases in which antiseptic treatment has failed and to the severer forms of the lesion. Before application the sore should first be cleansed and dried.

The contra-indications for the uses of cauterizing agents are when the surface involved is large and there is evidence of healthy reaction about to take place; when there is much inflammation; and when the sore is situated at the meatus urinarius. The objections to their use are the pain and inflammatory action which follows, the possible production of phimosis and the subsequent effusion of lymph, which is apt to cause indurations closely resembling hard chancre, and thus obscure diagnosis. (A.)

Nitric Acid :—The most frequently used cauterant, should be applied as follows: The chancroid is dried with absorbent cotton; then cleansed with hydrogen peroxide and again dried. The parts are now so held as to give them as much as possible a cup-like depression looking upward. This is filled with one drop or more of the acid by means of a glass rod; in a few minutes the part will turn white. The acid should be allowed to overlap the original margin of the sore. The superabundant acid must now be removed with cotton and a drop of carbolic acid applied to relieve the pain; the ulcer is now dressed with a dusting powder. (Cl.)

Sulphuric Acid:—This is hardly to be preferred to nitric acid, as it penetrates more deeply and is not easily controlled. Combined with charcoal (Ricord's Paste), with asbestos (Michel's Paste), or with saffron (Velpau's Paste) it is more manageable. (F.) It should be pressed down well into the irregularities of the surface, where it remains a black crust; after a few days this will come away and leave a healthy surface. (Cl.)

Acid Nitrate of Mercury:—One of the best caustics; apply with a glass rod. (B.)

Actual Cautery:—This agent acts well when the lesions are small and few in number. It should burn deeply so that the surface of the sores are well charred. Apply cold water dressings until the eschar comes off. (Cl.)

Radiant Heat:—The thermo-cautery is brought close to the sore, but not in actual contact, and held there for a few seconds. This dries up the ulcer, upon the edges of which sanguinolent striæ appear. Too long application should be avoided lest blisters form. A single application will transfer the lesion into a simple ulcer, which will heal rapidly under antiseptic powders; more so than when the actual cautery is used. (D. H.)

General indications for dressings may be summarized as follows: For acute inflamed and painful sores, sedative lotions, such as lead water, lead and opium wash, sulphate of zinc and opium; for indolent pale ulcerations, stimulating applications, such as strong zinc solutions, nitrate of silver, etc. (A.)

All dressings should be removed with great care; if adherent, they should be softened in order to avoid tearing the sore, thus favoring re-inoculation.

Moist Dressings :

Hydrogen Peroxide,

Mercuric Bichloride, 1-3000 or 4000,

Carbolic Acid, 1-60.

The sore should be sprayed with the selected solution and a pledget of lint soaked in the same kept applied and changed three times a day. (Cl.)

Dry Dressings:—These are indicated at any and all times.

Iodoform:—Stands first. Holmes said that the treatment of chancroid is now reduced to a simple matter in the majority of cases. There are few which will not yield to the application of iodoform. (Hl.)

Euophen, Di-iodoform, Acetanilid, Aristol, Traumatol, etc.:—The last has been used with great success as a substitute for iodoform; it has the advantage of being non-poisonous and non-irritating. (F.)

Calomel:—Useful to complete the healing process. (Cl.)

Guaicol:—Gently applied at first in order to anæsthetize, then mopped on freely, for its caustic effect, is reported to have brought about a speedy cure in all but one of thirty cases. (J. de P.)

Bromine:—10 minims to 1 ounce of olive oil forms a sedative dressing. (Sm.) **Cocaine:**—4 per cent. or stronger solutions to render cauterization painless. (Al.) **Pyrogallic Acid:**—As a powder, 25 per cent. with starch or a 5 per cent. paste acts well. It does not attack healthy skin. Apply night and morning and cover with gutta percha. It should be continued until granulations appear, after which oxide of zinc or calomel should be dusted on. (Cl.)

Alumol:—10 per cent. dusting powders are useful. (F.)

Pixol:—10–13 per cent. solutions painted on the sore will promote healing. (F.)

Iodoform and Glycerine:—May be preferred to iodoform alone as an application to crevices. (D.H.)

Hot Water:—When there is extensive inflammation, immersion of the part in a cup of hot water three or four times a day or a prolonged sitz bath are very beneficial. (D. H.)

Charcoal Poultice and Potassium Permanganate in weak solutions are indicated when the sore is gangrenous. (Cl.)

Ointments hold a secondary position and are condemned by some observers. They may, however, have been preferable in some cases. The following are recommended:

Hydrarg. Chlorid. Mitis,	grs. x.
Naphthalini,	ʒ i.
Ung. Camphoræ,	ʒ vii.
Pyoktanin. (Blue),	
Potass. Bicarb.,	āā grs. xv.
Aq. Destill.,	ʒ iii.
Alcohol.,	ʒ v.

Reduce by heat to ʒ iii and add

Pyoktanin. (Blue),	
Sod. Biborat.,	āā grs. xv.
Aq. Destill.,	ʒ iii.
Resortcini,	ʒ i–ii.
Vaselini,	ʒ i. (Sm.)

Subpreputial Chancroids:—Inject warm salt water every two or three hours, following with a solution of Potass. Permang. grs. i–x–ʒi, or Nitrate of Silver grs. x–xv–ʒi, or a mixture of Balsam of Peru and Iodoform. An offensive odor from the discharge indicates a tendency to gangrene. In this case the prepuce should be slit up, the glans penis exposed,

and the appropriate treatment applied. When the frænum has been destroyed it should be ligated or cauterized. (Cl.)

PHAGEDÆNIC CHANCROID. (See also *Phagedæna.*)

Rest in bed with antiseptic dressings, notably Iodoform (Ga.) The **Acid Cauterants** as mentioned are generally indicated. **Curettage** is recommended by Carleton before the application of nitric acid. **Potassium Permanganate**:—Grs. xl-lx-ʒi for application to the sore; then dress with lint saturated in a solution grs. i-ii-ʒi. (D. H.) **Menthol-Phenol**:—3 per cent. in hot water for bathing the part frequently. (F.). **Carbolic Acid**:—A few drops of the pure acid applied daily. **Pyrogallic Acid** and **Sulphuric Acid** paste as mentioned. **Bromine**:—Solution of 1-500 for continuous application. (Cl.) **Hot Water**:—Immersion of the part in hot water, as recommended for inflammation, is also beneficial in this form. (Ga.)

Actual Cautery:—If milder measures fail, apply the Paquelin or galvano-cautery; the latter is decidedly preferable as it is more easily controlled. Cases which have resisted all other measures may be arrested by this agent.

Boric Acid:—Saturated solutions are serviceable dressings after cauterization. (Cl.)

CHAPS AND FISSURES OF THE HANDS AND LIPS.

Bismuth Subnitrate, as a powder, **Rose Water Ointment**, **Cold Cream**, **Glycerine with Egg Yolk** or with equal parts of **Bay Rum**, or with equal parts of

Benzoin, Glycerole of Starch, Lanolin, Mutton Suet, Nitrate of Lead grs. x— $\bar{3}$ i (the last as a secret remedy is much employed in Europe), all useful for the hands or lips.

The following are of service

Camphor.,	$\bar{3}$ ss.
Acid. Carbolici,	M iv.
Ol. Neroli,	M iii.
Sevi,	$\bar{3}$ ii.

Soften a small bit and apply.

Hydrarg. Oxid. Rub.,	$\bar{3}$ iii.	
Cerat. Benzoin.,	$\bar{3}$ i.	(Sm.)

For fissured lips and cracks at mouth corners, the fissure should be filled and distended with the ointment repeatedly. A cicatricial tissue will be produced which will prevent subsequent fissuring.

Gutta percha in solution, or **Collodion**:—As protectives.

The following are for chapped hands.

Menthol,	grs. x.
Olive Oil,	
Salol,	$\bar{a}\bar{a}$ M xx.
Lanolin,	$\bar{3}$ iss.

Apply twice daily.

Lanolin,	$\bar{3}$ iii.
Glycerine,	$\bar{3}$ iv.
Boric Acid,	$\bar{3}$ iss.
Salol,	$\bar{3}$ i.
Menthol,	grs. xv.
Oil of Citronella,	M iii. (T. 98.)

Emol Keleet:—Said to be the best preparation for deeply fissured skin.

Emol. Keleet.,	$\bar{3}$ ii.
Zinc. Oxid.,	$\bar{3}$ i.
Glycerini Plumb. Subacetat.,	q. s.
Lanolini,	$\bar{3}$ ss.
Vaselini,	$\bar{3}$ ss. (T. 98.)

Use sufficient glycerine of acetate of lead to form the powder into a paste, then add the lanolin and vaseline.

It should be applied at night and the hand covered with lint.

Cerates of *Hydrastis*, *Calendula*, *Graphites*, *Borax*: (Bt.) Court Plaster will often speedily heal fissures on the hands in some persons.

CHILBLAIN.

General indications in the chronic form when the skin is unbroken call for stimulating and astringent applications; in especially chronic cases *Galvanism* is effective. When ulcers form they must be treated on general principles. (A.)

The following applied by painting on the affected part are recommended when the skin is unbroken: *Tr. Tamus Communis* and *Tr. Benzoin*. Great claims are made for both these remedies. Oil of *Cajuput*, *Tr. Capsicum*, diluted, or Oil of *Black Pepper* and *Tr. Cantharidis*, equal parts, *Collodion* and *Glycerine*, equal parts, *Tr. Iodine*, *Tr. Aconite* to allay the burning and tingling. (Al., Rd., Kp., Bt.)

Turpentine.—In combination as follows:

Venice Turpentine,	℥vi.	
Collodion,	℥ii	
Castor Oil,	℥iii.	(Hl.)

When there is great tenderness of the surface; or

Oil of Turpentine,	℥ss.	
Naphthol,	grs. xv.	
Lanolin,	℥ss.	(Sh.)

Tr. Rhus Tox., ℥ss-℥i., *Tr. Calendula*, or *Tr. Hamamelis*, 1 part of either to 4 of water. (Rd.)

Wet Compresses covered with oiled silk will afford marked relief. Fomentations of **Flaxseed Meal** or **Marsh Mallow** are also useful for relieving pains. (Bt.)

Ichthyol:—This is an effective remedy, and is used with equal parts of **Resorcin** and **Tannin** in 150 parts of water; the mixture must be well shaken before applying. The affected parts should be painted at night. After the first application it forms a glazed surface. Under its influence the skin shrivels and the œdema as well as the chilblains disappear. (T. 97.).

Carbolic Acid:—Used in various ways with good results; a 5 per cent. solution; or the following ointments:

Acid. Carbolici,	grs. xvss.
Ung. Plumbi,	
Lanolini,	āā 3v.
Ol. Amygdalæ,	3iiss.
Ol. Lavandulæ,	gtts. xx. (Al.)

This makes a soft ointment.

Or,

Acid. Carbolici,	3i.	
Tr. Iodi,	3ii.	
Acid. Tannici,	3ii.	
Cerat. Simp.,	3iv.	(B.)
Acid. Carbolici,	grs. iii.	
Lanolini,	3ss.	
Pulv. Camphor.,	3ss.	(Sh.)

Plumbi Acetat., viz.:

Plumbi Subacetat.,	3iiss.	
Ceræ flav.,	3iiss.	
Ol. Rapi,	3i	
Ovi Vitelli,	No. i.	
Liq. Plumbi Subacetat.,		
Creosoti,	āā gtts. x.	
Ext. Opii,	grs. iiss.	
Adipis,	3i.	(Al.)

Aconite and Chloroform Liniment is one of the best applications; **Sulphurous Acid**, $\text{ʒi}-\text{ʒi}$, with a little glycerine, acts quickly (Bt.); **Wardrop's Liniment**, 2 parts of tr. camphor with 6 parts of soap liniment; **Mustard Foot Bath** for the itching. (Hl.)

Decoction of Walnut Leaves is useful for bathing the parts, which should be then dried and rubbed with **Spts. Camphor**; after this dust on **Salicylate of Bismuth**, 10 per cent. in powdered starch. (Sj.)

Resorcin:—Sometimes is very effective, it may be used as follows:

Resorcin,	1 part.
Ichthyol,	1 part.
Tannic Acid,	1 part.
Water,	5 parts.

The mixture must be shaken and painted on at night. It is not to be applied in irritable chilblain. It dries the skin and is sometimes badly borne. (T. 97.)

The following ointments are of service:

Ung. Balsam Peru, **Ung. Zinc. Oxid.**, **Ung. Iodi**.

When ulceration appears the following:

Balsam. Peru,	ʒi .
Ung. Hydrarg. Nit.,	ʒii .
Zinc. Carb.,	ʒi .
Ung. Aq. Rosæ,	ʒi .
Ung. Plumbi Subacetat.,	ʒss .
Ext. Arnicæ,	ʒss .
Ext. Cocæ Erythrox.,	ʒss .
Ol. Anthemidis,	gtts. v.
Ung. Aq. Rosæ,	ʒss . (Sh.)

CHLOASMA.

In selecting local applications great care should be exercised to avoid the use of agents which may cause

discoloration of the skin, such as mineral acids, mustards or croton oil. (Sh.)

Hydrarg. Bichlorid.:—This remedy is much used; the following are some of its methods of application:

Hydrarg. Bichlorid.,	grs. iii.	
Aq. Destill.,	℥i.	(Pf.)
Hydrarg. Bichlorid.,	grs. ii.	
Emulsion. Amygdal.,	℥i.	
Apply night and morning.		(Kp.)

Hebra's method consists of applying a solution of the bichloride, grs. v-℥i, by means of a compress, for five hours. A blister will result which should be punctured and powdered with starch. The new epidermis will be lighter but it will not remain so. (Sh.)

Bulkley recommends the following:

Hydrarg. Bichlorid.,	grs. vi.
Acid. Acetici diluti,	℥ii.
Boracis,	℥ii.
Aq. Rosæ,	ad. ℥iv.

To be applied night and morning, at first gently brushed over the affected part, then afterwards rubbed on. If the skin becomes too scaly, suspend the application for a day or two and apply vaseline.

The following is also recommended:

Hydrarg. Bichlorid.,	grs. vss.
Zinc. Sulphatis,	
Plumbi Subacetatis,	āā ℥ss.
Aquæ,	℥iv. (Vn.)

Unna first washes the part with **Spirits of Wine** then applies a **Mercurial Plaster** made from the **White Precipitate**; this is allowed to remain on over night and the following used:

Bismuth. Subnit.,	℥iss.
Kaolini,	℥iss.
Vaseline,	℥vi-℥iss. (Sh.)

Copper Oleate:—In oleo-palmettic acid, sufficient to make a soft ointment, is recommended by Kippax.

Ung. Hydrarg. Oleate, **Ung. Hydrarg. Nitrate**, pure or diluted; **Tr. Iodine**, **Veratria**, grs. x-xxx- $\bar{3}j$; **Potash Soap**, applied continuously for four hours or the entire day. (Sh.) **Tr. Benzoin**, equal parts with alcohol, applied daily until desquamation occurs. (Pf.)

See also *Lentigo*.

CHOLERA ASIATICA.

Method of Cantani:—This is indicated in the stage of serous diarrhœa and in the algid state. (An.) It consists essentially in supplying to the system the water of which it has been deprived; this may be accomplished by intestinal injections of water, viz: Enteroclysis and hypodermatic injection, hypodermoclysis. (Gn.)

Enteroclysis:—Indicated in the premonitory diarrhœa. It may be administered by a long rectal tube. To secure retention it must be given slowly; if expelled it will serve the purpose of irrigation, but should be persisted in. The injection should consist of an infusion of chamomile containing 5–25 grams of tannic acid, and 20–30 drops of laudanum, and 20–50 grams of gum arabic. The temperature of the fluid should be 100°–104°. The dose for an adult is from 1–2 quarts. The injections should be repeated four times a day, and in grave cases after each movement. (Gn.)

The formula of Cantani is elsewhere given with water as a base instead of infusion of chamomile and wine of opium instead of laudanum. (Sm.)

Hypodermoclysis:—In the later or algid stage, hypodermatic injections of artificial serum are indicated. This is accomplished with a fountain syringe to which a perforated needle is attached. Strict antisepsis should be observed in all details. The artificial serum consists of the following:

Sodium Chloride,	4 grams (℥i).
Sodium Carbonate,	3 grams (grs. xlv).
Sterilized Water,	1 litre (1 qt.)

This amount is to be inserted at one time and repeated subsequently as required. The temperature of the fluid should be 100°–104° or higher if it can be tolerated. (Gn.)

The points of injection are usually the buttock, flank, thighs or below the pectoral muscles.

Intravenous Injections of Saline or Milk:—These are indicated in the algid stage, but hypodermoclysis is to be preferred. (Gn.) A formula for the fluid is as follows:

Sodium Sulphate,	℥iiss.
Sodium Chloride,	℥i.
Distilled Water,	Oii.
Inject six ounces slowly.	(T-98.)

Mustard Sinapisms:—Large size plasters to the epigastrium and abdomen for the relief of vomiting and pain. (Gn.)

After vomiting, the patient's mouth should be rinsed with a solution of **Hydronaphthol**, 1–5000, taking care that none is swallowed, and after each movement the buttocks, thighs and anus should be washed with soap and water. All vomited matter and discharges from the bowels should be gathered in a solution of carbolic acid 1–20, or chlorinated lime 1–10,

some of which should be in the vessel when used. The water thus collected should be mixed with more of the disinfectant, stirred and allowed to stand twenty minutes before throwing into the closet. (Ty.)

Heat:—Hot water bags and bottles, flannels wrung out in hot water applied to the abdomen and frequently changed are used for the relief of pain. (Gn.)

Stimulation of the Surface by friction, kneading and rubbing with mustard water to relieve cramps and to stimulate the circulation should be employed. (Gn.)

Methylene Violet:—15–45 minims of a 1 per cent. solution subcutaneously every 3–4 hours. (Sj.)

Chloral Hydrate and Morphine:—The following to be given subcutaneously in doses of 15–30 minims is highly recommended for the collapse:

Chloral Hydrate,	ʒ iii.
Morphia Sulphate,	gr. iv.
Cherry Laurel Water,	ʒ i.

The injection will cause burning and irritation, but suppuration has not followed according to Bartholow.

Nitro-Glycerine, Atropine and Ether hypodermically for stimulating the heart. (Bt.)

In severe cases all medicines may be administered hypodermically for speedy action. (Bt.)

CHOLERA INFANTUM.

Washing Out the Stomach and Irrigation of the Colon:—These are very important measures for the removal of the poison, which is one of the first indications of treatment. The irrigation of the intestines

should be thorough, using sterilized water, with or without Castile soap. The water may be tepid, or cold if the temperature is high, and the irrigation continued until it comes out clear. This procedure should be repeated on the return of the vomiting and purging. A flexible rubber catheter introduced six or eight inches may be used for the bowel. Objections to these methods on account of their supposed severity are mostly imaginary. (Gn.)

Opium:—Must be used with extreme caution in young children, who are very susceptible to its influence. It is valuable when there is much pain and irritability, and may be administered by enema, 2–5 drops in starch to an infant six to twelve months old. The effect must be carefully watched. The dose may be repeated in from six to twelve hours if necessary. (A. W.)

Morphine and Atropine:—These drugs must also be administered with great care to young children. Holt gives $\frac{1}{100}$ gr. of morphia with $\frac{1}{800}$ gr. of atropia for the first dose to an infant of one year. When stupor or collapse seems imminent, they are especially contra-indicated. (An.) The symptoms are the same as those calling for opium. These remedies are not often required, as others administered internally render their use infrequent; they are nevertheless at times invaluable.

Saline Injection:—As it is impossible to supply water to the exhausted tissues by the mouth or rectum, injection into the cellular tissues of the thighs and buttocks of a solution of 4 grains of common salt to a pint of sterilized water may be practiced with good effect. One pint, and often larger quantities, may be thus administered in twenty-four hours with advantage. (An.)

Salicylic Acid:—5 grs. in starch by injection has done good service. (Bt.) **Hot Mustard Baths:**—In bad cases for the relief of intestinal congestion and cutaneous circulation. (F.) **Brandy Compresses:**—Cloths soaked in brandy laid over the abdomen and covered with oiled silk. (Bt.) **Ice Bag:**—May be applied to the spine for the relief of cramps of the leg (Gn.) and to the head to control temperature. (An.)

Cool Sponging:—With gentle friction may be used frequently if there is much fever. (Gn., A. W.)

Keep the abdomen and extremities covered with flannel and the child out in the open air as much as possible. A cool place should be selected if practicable, but care should be observed not to chill.

CHORDEE.

The application of **Cold** in some form, such as ice cold metal or immersing the penis in cold water or a cold sitz bath is usually effective.

Gallobromal:—Urethral injections of 1–2 per cent. solutions. (F.)

Hop Poultice:—Applied to the penis during gonorrhœa will assist in preventing.

Morphia:—Subcutaneously in doses of $\frac{1}{5}$ gr. before retiring.

Suppositories containing **Belladonna** or **Opium** are effective, but, as a rule, cause constipation; if necessary, the following is suggested:

Opium,	1 grain.	
Powd. Camphor, .	3 grains.	
Oil of Theobroma,	q. s.	(A.)

Leeches:—In obstinate cases these will prove valuable; eight to ten ounces of blood may be abstracted.

For the following two or three days the patient should occupy a strictly recumbent posture. (A.)

CHOREA.

Hydrotherapy:—The wet pack is advised as effective:—A sheet is dipped in water at 50° – 54° , then lightly wrung out, spread on a mattress covered with oiled cloth, then closely wrapped around the patient who is rubbed from head to foot and placed between woolen blankets and returned to bed. (Sj.) The spinal douche is also employed, the temperature varying, according to the severity of the case, from lukewarm in the beginning to colder, lowering the temperature day by day as the patient improves. (T. 96.)

Electricity:—Central galvanization and general faradization act favorably. The galvanic current is preferable for vigorous children, the faradic for the anæmic and weak. (Sj.) Static electricity often gives brilliant results; some cases may be treated by the constant current and the static in combination. (Bw.)

Systematic Muscular Exercise:—Has been successful in cases of long standing. (T. 98.)

Rest:—Put the patient in bed and keep him there according to the severity of the case, three weeks being usually necessary. The rest should be complete both mentally and physically. (Sj.)

CICATRICES.

Massage and Electricity:—Galvanism, electro-massage (faradism) and electrolysis are all employed,

the latter especially, for the removal of hardened and hypertrophied new formations, and for atrophic cicatrices when not very numerous. (F.)

The following applied to granulating surfaces will prevent, it is claimed, scars appearing unsightly

Sod. Biborat.,	$\bar{3}$ iss.
Sod. Salicylat.,	grs. xii.
Glycerini,	$\bar{3}$ iii.
Aqua Rosæ,	$\bar{3}$ vi.

Apply frequently.

Or,

Ferri Chloridi,	$\bar{3}$ i.
Collodii,	$\bar{3}$ ii.

Apply daily.

(Bt.)

Thiosinamine:—Cicatricial contractures have been greatly benefited by hypodermic injections of this drug in alcoholic solution, 15 per cent., or in solution with equal parts of glycerine and water; the latter is not as painful as in alcohol and is just as active. Ectropion from lupus, talipinus equinus, etc., have been much benefited by its use. The dose is $\frac{1}{2}$ – $\frac{3}{4}$ gr. twice daily at the beginning, and gradually increased, rarely exceeding $1\frac{1}{2}$ grs. Hebra seldom gave as much as 3 grains, beginning with the smallest dose, though other observers cited by him gave as much as 4 grains, commencing with the smallest dose. Hebra suspended treatment for ten days every six weeks to two months. (F.)

Excision:—When the neighboring parts and the surrounding tissues admit, plastic surgery should be considered.

COLD—EFFECTS OF.

FROST BITE:

Gradual Application of Warmth:—While there is some difference of opinion as to whether warmth should be gradually or suddenly applied, most observers favor a gradual transition from cold to heat, which may be employed in the following manner: Rub the part with snow or immerse it in ice water, the patient during the procedure being kept in a cool room, avoid even the warmth of the bed, which has been known to set up inflammation with a tendency to run on to gangrene. As soon as the bodily temperature and that of the part involved has become about normal, stimulating friction should be applied, such as **Soap Liniment**, **Alcohol** diluted with water or **Spts. Camphor**. (A.)

Immediate Application of Warmth:—The immersion of the affected part in a hot bath at once is advocated by Shoemaker.

This is contrary to general usage.

The following are recommended for application after reaction has set in, the parts should afterwards be well enveloped in cotton:

Tr. Benzoin Comp:—Alone or in combination with **Chloroform**, 3 parts to 1 painted on, acts well. (Sh.)

Nitrate of Silver:—Grs. v- $\bar{z}$ i, applied with a brush. (W. C.)

Cocaine Hydrochlorate:—1-10 per cent. in **Peppermint Water**, useful for allaying irritation and itching. (Sh.)

Aluminum Acetico Tartaricum:—A 50 per cent. solution is astringent, antiseptic and non-toxic. (Sn.)

Alcohol:—In the following formula may be applied with old linen :

Alcohol,	℥ii.	
Cocaine Hydrochlorat.,	grs. v.	
Boric Acid,	℥i.	(F.)

Ung. Acid. Carbolici.—Grs. xx—℥i, useful for painful ulcerations of the fingers and toes. It relieves pain promptly and promotes resolution. (Al.)

Thiol:—In the form of a powder, viz :

Thioli Siccæ,	℥i.
Zinc. Oxidi,	℥ii.
Talci,	℥ii.

Or in an ointment,

Thioli,	
Vaselini,	āā ℥i.
Lanolini,	℥i. (Al.)

Acetanilid:—When the parts are raw and exposed, an ointment may be ordered. (Sj.)

Phulluah:—This drug is largely used as a liniment among the Hill tribes of India; it is a stimulant, emollient, anodyne and antiseptic. (F.)

Ichthyol:—Has been found effective; may be used with lanolin in the proportion of 2 drachms to 6 oz. (W. C.) (See also Chilblains.)

General Depression From Cold.

Treatment must be regulated by the degree of depression. While a fair pulse and consciousness remain, warmth should be applied very cautiously and gradually. But if there be apparent death from cold, and the patient's limbs are rigid, he should be covered with snow to the depth of several inches, his mouth and nostrils only being left free. The melted snow

should be replaced by fresh. If no snow be available, an iced salt bath for a few minutes may bring reaction. Where the limbs are less rigid, the clothing should be removed and the whole surface of the body briskly rubbed with snow or iced water until the pallor of the skin yields to redness. The rubbing should then be continued with dry flannels, and presently the patient may be wrapped in a dry blanket and placed in a cool bed in a cool room. Injections of tepid camphorated water will promote revival, and, as soon as the patient can swallow, camphor should be administered. Ultimately warmth may be very gradually applied. In cases of suspended breathing, artificial respiration should be resorted to. (Rd., A.)

COLIC.

Heat:—This agent in some of the following forms is generally effective: hot water bags or bottles, hot plates, hot fomentations, mustard poultices, etc.

Enema:—A copious injection of warm water will often relieve intestinal colic. (Rd.)

Turpentine Stupes:—Have been used with good effect. (F.) **Hot Baths:**—These are especially serviceable in renal and hepatic colic. **Morphia:**—Subcutaneous injections are usually necessary in renal and hepatic forms. **Chloroform:**—Inferior to morphia but superior to baths or opium. (R.)

COLLAPSE.

Heat:—In the form of hot water bags and bottles should always be applied to extremities and sides.

Strychnia Sulphate or Nitrate, $\frac{1}{30}$ – $\frac{1}{10}$ gr., **Whiskey**

or **Brandy** may be injected hypodermically, the latter every 10 minutes in half drachm doses until reaction. (A.)

Digitalis:—15 minims every 15 minutes hypodermically. **Atropine** $\frac{1}{100}$ gr. may be given with the first dose of **Digitalis**. (A.)

Aqua Ammonizæ:—10–60 drops diluted with from 1–8 drachms of sterilized water, injected into a vein, is of great benefit. (F.)

Turpentine Enema:—Half an ounce rubbed up with raw egg in the form of an emulsion is a powerful stimulant. (A.)

Camphorated Oil:—1 part of camphor to 9 parts of aseptic sweet oil in doses of 15 minims, hypodermically, is a prompt and powerful stimulant in cases of sudden prostration. (F.)

The following line of treatment is for collapse after a prolonged operation, extensive loss of blood, and shock following severe injuries: Place the patient in such a position that the head will be lower than the body, apply around him hot water bottles and bags, and rub actively; hypodermics of **Ether** or **Caffeine**. **Brandy** will be found beneficial; likewise **Champagne** and by the rectum. For the purpose of stimulating the heart a momentary whiff of **Nitrite of Amyl**, and for stimulating the respiration, slap the face with a wet towel, also use Laborde's rhythmic tractions of the tongue, inhalations of **Oxygen** and Silvester's method of **Artificial Respiration**. (T.-97.)

Normal Saline Solution by transfusion will be found of the greatest service when hæmorrhage is the cause. (T. 97.)

Beef Extract in large doses by enema with hot water acts rapidly. (P.)

COMA.

Oxygen Inhalations:—Indicated when narcotic poisoning is the cause, if persistently employed, life may be saved. **Cold Douche:**—For stupor of drunkenness and also for narcotic coma, should be kept up for some time if pulse and breathing continue good or become no worse. (Rd.)

Blisters and Sinapisms:—Applied in quick succession to the chest, abdomen, thighs and calves, are valuable in critical condition near the end of an acute illness, “only such cases to be selected as are to be tided over a dangerous point.” (F.) Blisters to back of the neck. (Bt.)

The following methods of treatment are applicable to *coma due to affections of the brain and meninges* (T. 97.):

1. Place the patient in a well aired room.
2. Massage entire body with alcohol and water.
3. Apply sinapisms to the legs.
4. Apply 4 leeches to the mastoid process or bleed from the arm.

5. Give an enema of the following:

Sodii Sulphat.,	$\overline{3}$ i.
Sennæ Fol.,	$\overline{3}$ ss.
Aquæ,	Ad. $\overline{3}$ viii.
Ft. Infusion.	

6. Practice rhythmical tractions of the tongue by the method of Laborde.

7. If deglutition is too difficult to take food, give this enema:

Yolk of ten eggs,	.
Peptone, Dry,	$\overline{3}$ ss.
Milk,	$\overline{3}$ viii.

Chapman's Method of Ice to the Spine:—This may be employed effectively in *apoplectic coma*; for the technique and indications see the subject under the head of Paralysis.

For coma of infectious toxic origin give subcutaneously every hour an injection alternately of **Ether** or **Caffein** :

(1) Caffein.,	grs. xlv.
Sod. Benzoat,	℥i.
Aq. Bullient.,	℥iii.
Dose, mx.	

(2) Every four hours a tablespoonful by the mouth of the following: *

Ammon. Acetat.,	℥i.
Tr. Moschi,	grs. xv.
Ess. Menth.,	M. iv.
Tr. Jalap.,	℥iss.
Tr. Gentian,	q. s. Ad. ℥iv.

(3) Copious injections of cold water, 1½ qts. to provoke diuresis.

For coma of neurotic origin, the following enema :

Tr. Valerian,	℥iss.
Musk,	grs. xv.
Yolk of Egg,	℥.
Water,	℥i.

Compress the carotid arteries, practice rhythmical contraction of tongue and pass the interrupted current through different parts of the body. T. 97.)

Uræmic Coma.

See Uræmic Poisoning.

* NOTE.—The above formula, though outside the province of this book, has been given to complete the method quoted.

COMEDO.

(Compare Acne.)

Wash the parts freely with warm water and soap before attempting extraction. The individual comedo should be squeezed out with the fingers protected with a handkerchief, care must be taken not to bruise the skin; after extraction one of the following may be used:

Sulphur Sublimate:— ʒii with alcohol ʒi . Apply night and morning and allow to remain on. (Kp.)

Salicylic Acid:—An alcoholic solution, grs. xv ʒi , will soften and aid in their removal. (Al.)

Friction:—Rubbing the skin with green or soft soap and water is excellent. Avoid over-stimulation. (Ja.)

The following is useful; it should be rubbed on at night with a piece of flannel:

Saponis Olivæ Præparatæ,	
Alcoholis,	$\text{āā } \text{ʒi}$.
Aq. Rosæ,	ʒvi . (Ja.)

Resorcin:—As a lotion or ointment. (B. H.)

Zinc Oleate:—With 3 per cent. salicylic acid or French chalk. (Sm.)

Thymoli,	grs. x.
Acid. Borici,	ʒii .
Tr. Hamamelidis Virg.,	ʒi .
Aq. Rosæ,	ʒiv .
Apply once or twice a day.	(Sh.)

Medicated soaps can be used to advantage; those containing Sulphur, Chamomile, Ergot, Salicylic Acid or Corrosive Sublimate should be preferred.

CONDYLOMATA.

Immediate removal with the scissors and cauterization of the base with **Nitric** or **Carbolic Acid** may be practiced in the pedunculated variety. Broad growths should be first cocainized, then nitric acid applied. After removal and cauterization, use some of the antiseptic dusting powders, such as **Dermatol**, **Iodoform**, **Bismuth Subnitrate**, etc. **Calomel**:—Dusted on with the use of moderate pressure is best for condylomata with broad flat base, especially when they are numerous. (Cl.) The parts should first be washed with chlorinated soda.

Tr. Thuja:—For use when the growths are situated on glans penis or scrotum accompanying gonorrhœa. (Hg.)

Labarraque's Solution:—Diluted, recommended for warts around labia, followed by calomel, resorcin, or burnt alum and savine, equal parts of each. (B.H.)

Hydrarg. Bichlorid.:—One of the best remedies. Bathe the part with a 1–2000 solution and dust on the following powder: powdered savine and powdered salicylic acid, equal parts. (Vn.)

Collodion:—In combination with **Salicylic Acid** or **Hydrarg. Bichlorid.** painted on daily is recommended. A drachm of either to an oz. of collodion. (B.H.)

Chloracetic Acid:—An excellent caustic. (Al.)

Acetic Acid:—One ounce, with **Salicylic Acid**, half a drachm, is a combination preferred by Unna; the mixture is applied twice daily with a camel's hair brush. (F.) **Chromic Acid** 3i ÿii , aq. destill. 3i , forms an efficacious caustic; the surrounding parts must be well protected. (B.) **Caustic Lead**:—Lead oxide, 4 grs. mixed with 2 drachms of a saturated solution

of caustic potash (100°) forms a caustic which produces a black slough but does not penetrate deeply. (N.) Contact with the growth for five minutes will soften the mass and permit easy removal, after which apply an antiseptic dusting powder.

Nitric Acid:—In addition to its action as a cauterant, may be used in an aqueous solution, ʒi—Oj, for bathing the affected surfaces. Under its influence the growth will disappear. (B.)

Euphoren:—An excellent dusting powder. (Sm.)

CONJUNCTIVA—BLENNORRHOEA OF.

Keep the patient quiet, allowing him to go into the open air only at stated intervals. Strictly quarantine, and observe great caution in regard to cleanliness and the prevention of contagion. (Ro.)

Iced Cloths:—These should be applied to the closed lids while in the recumbent position for fifteen or twenty minutes continuously, every one, two or three hours, according to indications. (Ro.) They are also advised to be kept applied continuously as long as there is marked oedema of the lids and conjunctiva.

Nitrate of Silver:—A solution of grs. v—xx—ʒi, should be applied to the palpebral conjunctiva once or twice a day by the surgeon while the nurse may use alum, grs. ii—ʒi. (Ro.) Strong solutions of the nitrate of silver should be neutralized by salt solutions. (Bl.)

Cocaine Hydrochlorate:—A solution of grs. viii—ʒi should be dropped into the eye according to circumstances for the relief of pain when the iced cloths fail to relieve. When using this remedy the eye should be flooded with it, using 10–30 drops. (Ro.)

Alum Crystal:—As the swelling of the lids and other symptoms subside, this may replace the iced cloths and nitrate of silver; the lids are inverted and the alum applied by the surgeon. (Ro.)

Benzoated Lard or Vaseline should be smeared on the lids at all stages of the disease after applications. (Ro.)

The absorbent cotton and old linen used in making applications, and cleansing the eye, should all be burned and the patient's clothing washed apart from others.

CONJUNCTIVITIS—ACUTE CATARRHAL.

Boric Acid:—According to Noyes a 1 per cent. solution is the best local remedy. The following also have proved useful:

Acid. Borici,	
Sod. Biborat.,	āā grs. x.
Aq. Destill.,	℥j.

Or,

Acid. Borici,	grs. vi.
Aq. Camph.,	℥j.
Aq. Destill.,	āā ℥j.

Cocaine Hydrochlorate:—2 per cent. solution may be dropped into the eye at intervals of ten minutes until sensitiveness is allayed. This is recommended when there is much discomfort from heat, grittiness and smarting. Since the remedy has the property of causing the blood vessels to contract, it is useful. (Ny.)

Zinc Sulphate:—1–2 gr. to the ounce of water is of service. (Ro.)

When the inflammation is of traumatic origin the following:

Tr. Aconiti,	gtts. x.
Aquæ,	℥j.

Or,

Tr. Arnicae,	gtts. x.
Aquæ,	℥i.

Or,

Tr. Hamamelidis,	
Tr. Arnicae,	āā gtts. x.
Aq. Destill.,	℥j.

Tr. Ledum:—When there is much ecchymosis ten drops to the ounce of water. Solutions of **Formalin**, 1–2000, and **Bichlorid of Mercury** 1–10,000, are also employed. (Bl.) **Alum:**—Solution of grs. i–ii–℥j. (Ro.) This remedy is condemned by some oculists as injurious. (Ny.) **Cold Cream** or simple **Cerate** applied to the lids is of service. Many cases require no other treatment than the boric acid and borax prescription above.

If the inflammation is more severe the following will prove useful. **Lead Acetate:**—1 drachm with infus. of opium, 1 pint. This should never be used when there is any tendency to ulceration of the cornea, as it forms a precipitate on it. It is only useful in the early stages and must be applied warm. **Liq. Plumb. Subacetate:**—2 drachms to water 6 ounces, is also employed. **Nitrate of Silver:**—Grs. ii–℥i, dropped into the eye may be used daily when there is a large quantity of secretion or intense redness or effusion which calls for active interference. **Tannin:**—Gr. sv–℥i, suitable when œdematous infiltration is extensive and secretion moderate. It is sometimes also useful in old people. (Ny.)

Hydrarg. Oxid. Flav.:—Grs. ss.—3j, answers well when there are incrustations on the eyelids. Apply only at root of the cilia, and do not allow any to enter the eye. (F.) Cleanliness is in all cases of the utmost importance.

After subsidence of the symptoms examine for hypermetropia and astigmatism.

CONJUNCTIVITIS GRANULOSA.

(See Trachoma.)

CONJUNCTIVITIS — CHRONIC CATARRHAL.

Alum:—1–2 grs. with 10 grs. of **Boric Acid** is very useful in many cases. A little **Morphine** may sometimes be added. **Nitrate of Silver:**—Grs. ss—3i. Its long-continued use will cause an unsightly and irremovable stain; in strong solution, it may cause permanent ulceration of cornea. It is nevertheless an old and well used remedy. **Tannin:**—Grs. ii—v—3i. A few drops in the eye; or evert eyelid and paint with a sol. grs. x—xxx—3i. **Zinc Sulphate:**—Extensively employed:—Grs. ss—ii—3i. The solution may be applied two or three times a day. **Wine of Opium:**—A drop in the eye relieves pain and improves condition of the membrane. (Al.)

CONJUNCTIVITIS—DIPHTHERITIC.

Atropia or Scopolamine:—To be used from the start. (Ro.) **Papoyotin:**—1 part with 5–10 parts of water and glycerine (not to be substituted by papoid) may be applied every hour. (Jac.)

Ice and Cold Applications:—Authorities differ. Ice should be persistently applied according to Jacobi. On the other hand MacBride says cold applications should not be made to any great extent because it interferes with the nourishment of the cornea. Roosa says hot or cold applications to the closed lids as may be most comfortable. Great care should be exercised in cleansing the eye, as the slightest abrasion of the cornea will allow the membrane to form on the denuded surface.

Hydrogen Peroxide:—3 per cent. solution recommended for cleansing; too strong solutions cause haziness of cornea. The secretions should be removed every night and cotton dipped in a saturated solution of boric acid, and an ointment applied to the edges of the lids. (Ro.) **Antitoxine Serum** is reported to have been used with success. (T. 96)

CONJUNCTIVITIS, PHLYCTENULAR.

Atropia Sulphate:—Instillations of a solution of grs. ss—ii—ʒi, should be made two or three times a day. (Ro.)

Cold Douche:—If there is much photophobia this is very useful; it is often of immediate service, but is a harsh remedy. Cocaine may be substituted, but if not effectual, the douche should be employed. (Ro.)

Glycerate of Tannin:—Very useful for application to the nostrils for the catarrh which is usually present. (Ro.) **Calomel:**—By insufflation or dusted on

* NOTE.—Before applying Calomel to the eye first inquire if the patient has been on a course of iodides, for a chemical combination may follow which may cause great disturbance.

with fine camel's hair brush is a very valuable application; it should not be employed when there is much ciliary irritation, as shown by photophobia, lachrymation, or contracted pupil; these should first be controlled by atropine. (Al.) Cocaine should be used until the acute symptoms, especially the photophobia, have disappeared. (Ro.)

Ung. Hydrarg. Oxid. Flav.:—Has been used successfully instead of calomel. A small portion is placed between the eyelids and rubbed on. (Ro.)

Bismuth Loretinate:—Dusted in the eye promptly relieves. (T. 97.)

Pyoktanin:—A solution of 1-1000 acts best in cases marked by lachrymation and great congestion of the palpebral conjunctiva. **Ichthyol:**—1-3 per cent. solution has been found very useful. (T.98.)

Antipyrin:—2 per cent. solution. (T.98.)

CONJUNCTIVITIS, PURULENT.

In the earlier stages mild antiseptic lotions and bathing the eye in hot water are indicated, but it is usually not until after this period that the patient is seen by the surgeon. (N. O.) When the stage of secretion has set in, the following remedies will be indicated:

Nitrate of Silver:—This remedy has more power than any other in neutralizing the poison. When the secretion and swelling are slight, solutions of 2-5 grs. to the oz. may be used; but when there is much swelling and secretion, the strength should vary from 10 to even 60 grs. to the oz. in very severe forms. The solution is to be applied to the everted lid with a brush and the cornea protected at the time of ap-

plication. Salt solution must be added immediately to neutralize. (Bl.) These solutions should be followed at once by ice cold applications in order to prevent reaction. (N. O.)

Formalin:—1–1000 or 2000 must be used freely for bathing the eye. **Hydrarg. Bichlorid.**—1–4000 (Bl.) or 1–5000 or 10,000; or saturated solutions of **Boric Acid**, for cleansing.

Potass. Permang.:—Grs. iii–x– $\frac{3}{4}$ i have been highly recommended; they should be applied thoroughly to the conjunctiva twice a day in severe cases and once a day in mild.

Ice Cold Applications:—Placed upon the lids are of great value in checking the inflammation. They should be kept continuously applied, being changed as soon as warm, which will be in a minute or two. (N. O.)

The following is a summary of treatment recommended by Roosa:

Early Stages.

1. Cleanse the conjunctival sac as often as the discharge collects, night and day, with absorbent cotton, saturated solution of **Boric acid** or **Borax** in water. 2. Cold applications by **Ice Cloths** unless there is ulceration of cornea. 3. Free use of **Vaseline** to lid and surroundings.

Later Stages.

1. Daily application of **Nitrate of Silver** grs. v–x– $\frac{3}{4}$ i, or every two hours application of a solution of $\frac{1}{480}$ gr. to the oz. in the form of spray until the epithelium of the cornea is coated. 2. The dropping into the eye of antiseptics by an attendant.

Atropine:—Indicated if the cornea shows signs of becoming involved. (Ro.)

When only one eye is affected the other should be hermetically sealed by the Buller shield or some other such device. Prophylaxis from contagion, and isolation of patient when possible should be strictly enforced. (N. O.)

CONSTIPATION.

It should be the rule to go to the closet at a definite and regular hour each day irrespective of inclination; the best time is immediately after breakfast, as intestinal peristalsis has already been induced by that meal. Long continued and ineffectual straining should be avoided. Persons of sedentary habits should take regular exercise, especially outdoors, riding, bicycling, tennis and other sports. (Gn.)

Hydrotherapy:—The cold spinal douche administered while the patient is in a hot bath or the alternate application of hot and cold water. When there is spasm, sedative applications, as flannels wrung out in hot water, placed over the abdomen at night and covered with oiled silk. (M. N., 12, 10, 98.) Cold sitz baths in the morning are also beneficial. (Rd.)

Massage:—General or to the abdomen; percussion, and pounding the abdomen with the inner border of the fists in the direction of the ascending and descending colon are effective in some cases. (Sj.)

When the abdominal walls are flaccid and the intestines atonic, a moderately firm bandage will be of benefit, but exercise of the abdominal muscles is much better; this may be performed by forcibly and rapidly retracting the abdominal muscles, repeating the movements several times a day. (Gn.)

Oil Injections:—From 6–8 ozs. are injected while the patient is lying on the left side with the hips elevated; then he lies upon the back and finally on the left side. The results are not immediate, but the effect will persist for three or four days. (M. N., 12, 10, 98.)

Glycerine:—Injections of a drachm or two; or glycerine suppositories are useful. (Gn.)

Gluten Suppositories:—In mild cases and for children. (Gn.)

When it is not expedient to give a cathartic, injections of Castile soap and water with olive oil may be used, especially if there are hardened masses of fæcal matter. For an immediate effect the following may be injected into the rectum:

Sulphate of Magnesia,	℥ ii.
Glycerine,	℥ ii.
Turpentine,	℥ ss.
Boiling Water,	℥ iv.

Inject the entire quantity, and a movement will soon follow.

This is valuable in abdominal surgery for emptying the bowels before operating. In cases of arteriosclerosis and high vascular tension it will reduce the latter and relieve distressing symptoms. (Gn.)

Electricity:—Galvanism; an insulated rectal electrode is attached to the negative pole and inserted into the rectum, the positive electrode, which should be flat and large, is placed over the abdomen. A moderate current, not sufficient to produce discomfort, is then applied. It is very important that the rectal tube should be insulated; it should also be hollow so that from four to eight ounces of water may be thrown into the rectum. The applications should be repeated daily or every other day. (Gn.)

CONTUSIONS.

Rest to the part is important; this may best be secured by placing the patient in bed, by **Splints**, **Plaster of Paris** or **Bandages**, according to the nature and location of the injury. Contusions of the back may be advantageously treated by the application of **Rubber Adhesive Plaster** cut in strips two and one-half inches wide and long enough to extend well beyond the contusion. The plaster should be placed so as to run in different directions. (W. C.)

The following are some of the numerous lotions recommended for bruises:

Arnica:—Widely employed. The tincture may be diluted with water, 1 part to 10, and saturated compresses applied covered with oiled silk. **Hamamelis**:—Instead of arnica, especially when there is much ecchymosis and the skin is broken, 1 part to 6 of water. (Rd.)

Lead and Opium:—A combination long in use and of established merit, viz:

Tr. Opii,	
Liq. Plumbi Subacetat. Dilut.,	āā ʒii.
Aq. Destill.,	ad. Oj.

Apply with saturated compresses and cover with oiled silk and bandage. (Whar.)

Alcohol. Dilut.,	ʒiii.
Liq. Plumbi Subacetat. Dilut.,	ʒi.
Morph. Acetat.,	grs. x.

Apply on a layer of lint and allow to evaporate; this is excellent for keeping down inflammation. (Sm.)

Opium:—The tincture with Lin. Saponis, one drachm to the oz., rubbed in once or twice a day. (Wa.)

Lead:—As Goulard's cerate or the carbonate, viz:

Plumbi Carbonatis,	℥ ss.	
Creosoti,	M x.	
Ol. Olivæ, q. s.		(Sm.)

Hazeline:—An excellent preparation made of the witch hazel twigs as an embrocation. (Sm.)

Calendula:—1 part of the succus with about 5 of sterilized water, when there is laceration together with contusions. (M. H.)

Capsicum:—A strong tincture mixed with gum gives excellent results in removing discoloration of the skin. (R.) The following also recommended:

Tr. Capsici,		
Tr. Myrrhæ,		
Tr. Opii, .	āā ℥ ii.	
Tr. Guaiac.,	℥ i.	
Spts. Camphor.,	℥ ii.	(Sn.)

Aqua Sedativa:—May be applied to painful parts on saturated compresses, without friction. (N.)

Ammonia Chloride:—For contusions of the face with much ecchymosis, Agnew recommended Alcohol and Water equal parts and the chloride, 5 grains to the oz. of this mixture. Or a simple lotion of five grains to the oz. Stronger solutions also are used as ℥ ii—iv—Oj. (Sm.)

A good formula is as follows:

Ammon. Chlorid.,	grs. xx.	
Tr. Opii,		
Alcoholis,	āā ℥ i.	
Aquæ,	q. s. ad. ℥ i.	

Several layers of lint are saturated, applied over the contused tissues and then covered with oiled silk or rubber. (Whar.)

Ruta:—10 drops of the mother tincture to water, 1 ounce, may be employed as a lotion in place of arnica when the latter has a tendency to produce erysipelas, and when the contusion is more of the bone than the soft parts. (Rd.) **Ichthyol:**—Pure or with equal parts of water gives good results. (Al.)

Cold Water:—Bathing the parts in cold water followed by cold compresses. (Rd.) **Hot Water:**—Instead of cold affords great relief to pain and reduces swelling.

The following liniment appears to be more suitable to sprains and bruises combined:

Ammonia Water,	
Fld. Ext. Arnica,	
Soap Liniment,	
Oil of Turpentine, equal parts.	(Sm.)

Liniments:—Several are of service and are much used for relieving the pain of contusions especially when associated with sprains, viz:

Lin. Chloroformi:—(Tr. Aconit., Chloroform. āā ʒss, Lin. Saponis, ʒi.) A piece of linen or flannel saturated with the mixture applied to the painful part and covered with oiled silk to prevent evaporation. (Al.) **Lin. Aconiti, Lin. Belladonnæ** these two are best combined. **Lin. Camphor., Lin. Saponis** (N.)

CONVULSIONS.

General Directions:—Place the patient in the horizontal position in all cases, give fresh air, loosen the clothing, insert a plug of cork or soft wood between

the teeth to prevent biting of tongue, and sprinkle the face with cold water.

Epileptic Convulsions:—The same general directions as above will usually be sufficient. (Pt.)

Hysterical Convulsions:—Same as above, but no cork in the mouth is necessary as there is no wounding of tongue. **Cold Effusions or Ice Bags** on the head and inhalations of **Ammonia** or **Camphor**. (B.)

Infantile Convulsions:—**Hot Baths with Mustard** are very widely employed and generally recommended. During the bath an ice bag should be applied to the head. In robust children, especially if there is colic or abdominal disturbances, these baths are likely to prove of service, but if there is reason to believe the convulsions are due to cerebral disease, or arise at the end of an exhaustive illness, they are not advisable and may prove injurious.

Tepid Baths:—If the temperature is exceedingly high (105° – 106°) it is probably the exciting cause; place the infant in a tepid bath and pour cold water on the head and allow it to run down into the tub and gradually lower the temperature.

Ether or Amyl Nitrite:—A few drops by inhalation to calm the nervous system and check the violence of the spasms. (A.W.)

Milk of Asafœtida:—May be used freely as an injection. (Sm.) **Leeches** to the mastoid process. (T. 96.)

Cold Baths:—A momentary immersion in an ice cold bath followed by friction has been found to be successful by Anders in obstinate cases, after hot baths had failed. **Cold Compresses**:—Take two folded handkerchiefs, dip them in cold water containing a little vinegar and envelop limbs as far as the knees. (Sj.)

Enemata administered to relieve the bowels constitute an important measure. (Bt.) **Chloral and Musk**:—Simon recommends, after warm enema with oil, glycerine or salt has acted, the following clyster: **Chloral** 8 grs. to an infant from 3 to 6 months, 11 grs. to one 9 months, 15 grs. to a child of one year, with 20 drops of **Tincture of Musk**, giving this in three or four parts to ensure retention. (T. 96.) The amount of chloral here advised is so largely in excess of the usual dose that caution is necessary.

Chloroform:—One of the most effective antispasmodics. A few drops may be inhaled. Ruddock recommends one part of chloroform with two of olive oil, rubbed in over the spine as a preventive.

Convulsions of infants a few weeks old who are artificially fed are due in a large majority of instances to indigestion; a wet nurse or change of food, therefore should be procured at once. (A. W.)

Besides irritation of the alimentary canal and dentition, burns, foreign bodies in the nose and ear and hernia, undescended testicle, retention of urine or any other external source of irritation should be remembered as possible causes.

Puerpural Convulsions:—(See also **Uræmic Poisoning**.)

Induction of Labor:—The weight of authority tends towards immediate delivery. In general nothing is gained by endeavoring to protract gestation and much is lost. If dietetics and medicinal measures have failed, induction of labor should be performed, this procedure being the best both from the standpoint of the mother and of the child. (G. J.)

When eclampsia comes on suddenly, and when uræmic symptoms are increasing, the uterus should be emptied as quickly as possible.

During the convulsion, the following will be found of service while waiting for the uterus to empty:

Chloroform:—Will afford temporary relief only, but time is gained for other measures; its utility unquestionable when there is no cerebral congestion. (B)

Morphia:—Hypodermically is a most valuable agent, presenting the greatest advantage and fewest disadvantages. It should be given in large doses up to $2\frac{1}{2}$ grs. in twenty-four hours. (T. 97.)

Veratrum Viride:—Very highly praised, can be administered hypodermically; 26 cases with no deaths treated thus and by the mouth, until pulse dropped to 60 per minute, are mentioned by Sajous.

Amyl Nitrite:—Inhalations in cases characterized by high arterial tension are of service. (B.)

Glonoine:—Hypodermically $\frac{1}{50}$ gr. hourly. Same indications as amyl nitrite. (G. J.)

Pilocarpine:—Hypodermic injections $\frac{1}{6}$ gr. were administered in 4 cases; in 3, convulsions stopped quickly and permanently; it is contra-indicated by pulmonary disease. (Sj.)

Ice to the head and **mustard** to the feet to relieve congestion. (Wa.)

Venesection:—When the pulse is full and bounding and when there is much cerebral congestion.

Chloral:—40 gr.-doses by rectum. (G. J.)

Uræmic Convulsions:—(See *Uræmic Poisoning*.)

CORNEA, ULCERS OF.

Galvano-Cautery:—The serpiginous variety are best arrested by a delicate quick touch of the cautery, especially in desperate cases. (Mac.)

Atropine:—Solution of grs. iv– $\bar{z}$ i, for adults, half this strength for children; drops are instilled with sufficient frequency to maintain mydriasis if there is a tendency to iritis. (T. 97.)

Eserine:—One-fifth per cent. solution, 1 drop in the eye four times a day to keep the pupil contracted, when there is no iritis, for progressive ulcers. (Mac.) It is indicated especially in peripheral ulcers with a tendency to perforation of the cornea. (T. 97.)

Hydrarg. Bichlorid.:—Solution of 1–2000; one drop in the eye for cleanliness. Brushing the ulcer with a solution of 1–1000 will often convert it into an active ulcer and lead to repair. (Mac.)

Hydrogen Peroxide:—Solutions of 3 per cent. may be employed in sloughing varieties. (Al.)

Pyoktanin:—Solutions of 1–1000 claimed by Stillington to give satisfactory results. Other authorities less positive. (Al.)

CORNEA, OPACITIES OF.

Calomel:—Dusted on every two or three days, prolonging the treatment for some weeks, is effective. (F.)

Ung. Hydrarg. Oxid. Flav.:—This ointment in connection with massage has been recommended. (Al.)

Thiosinamine:—Has remarkable effect in clearing up corneal opacities, but should not be used in cases in which a vestige of inflammation is still present, and which might be started up into fresh phlyctenulæ. The remedy is employed hypodermically, the injection being made deep into the muscular tissues. Alcoholic and watery solutions are both employed ;

the former is painful, the latter less so and apparently as effective. The dose varies according to different authorities; in the beginning inject $\frac{1}{2}$ – $\frac{3}{4}$ gr. twice a week. Hebra has used as much as 4 grs. In the prolonged use of the remedy, it has been found desirable to suspend its administration for ten days every six weeks to two months. (F.)

Iodine:—1 to 3 per cent. in vaseline applied to the palpebral conjunctiva acts with promptness in superficial opacities. When vision is impaired from the central position of the opacity, and all treatment has been unsuccessful, one of the operations for artificial pupil must be performed. (Ro.)

Labarraque's Solution:—In the proportion of 1 part to 7–10 parts of water has been highly recommended for sloughing ulcers; in the former strength it may be applied directly with pledgets of lint; in the latter it may be used as a wash. (Al.)

Formalin:—A solution of 1–2000 when applied freely acts well. Solutions of 1–1000 painted on the ulcer every two or three hours retard the ulcerative process but are very painful. (Bl.)

Protective Bandage:—This should be generally used but is contra-indicated when there is considerable discharge and in young children; after corneal perforation employ a pressure bandage.

Scopolamine Hydrochlorate:—Dissolved in vaseline or castor oil, is a useful mydriatic in superficial ulcers. (T. 98.)

Iodine:—Of great benefit in spreading ulcers; first curette the ulcer then wipe it dry with a cotton covered probe and apply iodine thoroughly; wash off the excess with a solution of **Formaldehyde**, 1–1000, the latter being also used as a collyrium during the treatment. (T. 98.)

Iodoform or Iodol:—In extending ulcers after cauterizing with the galvano-cautery, touching only the advancing margin of the lesion; these remedies finely divided are useful for filling in the ulcer. (T. 98.)

CORNES.

Salicylic Acid:—One of the most effective remedies. It may be applied in the following manner: Saturated solution in collodion painted on, or moisten the part with some antiseptic lotion and dust on the powdered acid thickly; then apply several layers of borated lint and bind down with gutta percha or some convenient dressing. This should be left on for four or five days, then renewed if necessary. The plaster mull of Unna consisting of 30-50 parts of the acid and 5-10 parts of creosote spread on gutta percha. (F.) The following applied once or twice a day with a camel's hair brush has been used with great success:

Acid. Salicylici,	ʒi.
Ext. Cannabis Ind.,	grs. x.
Collodii,	ʒi. (Kp.)

Vigier's Preparation sold as "Hebra Corn Remedy" is similar, namely:

Acid. Salicylici,	grs. xv.
Ext. Cannabis Ind.,	grs. viii.
Alcohol,	M xv.
Ether.,	M xl.
Collodii Flex.,	M lxxx.

Paint on three times a day for a week. Then soak the part in hot water and the corn can be picked out. (Ja.)

Tr. Iodine or **Tr. Verat. Viride**—Painted on are useful for reducing inflammation. (Bt.)

Calendula:—20 per cent. solution with **Carbolic**, 1-100, is useful in allaying inflammation arising from injudicious paring.

Nitrate of Silver:—Applied in the following manner is highly recommended: Soak the corn in hot water, then pare down the horny layers and apply a 30 per cent. solution. It is claimed that the corn will rarely reappear. (F.)

Copper Oleate:—Melted and spread on plaster will soften. (Sm.) **Liq. Potassa**:—For softening so as to permit removal. (N.) **Diachylon Plaster**, **Flexible Collodion**, **Poultices**, **Plasters** of soft material, as felt with a hole in the centre, also useful.

The following are recommended when a caustic effect is desired (F.):

Glacial Acetic Acid, applied by means of a stick.

Potass. Bichromate, a saturated solution.

Sodium Ethylate, applied with a glass rod.

Or,

Acid. Salicylici,	ʒi.	
Zinc. Chloridi,	ʒss.	
Collodii,	ʒi.	(F.)

COUGH.

Certain drugs administered in the form of lozenges, inhalants and cough mixtures have a topical effect on the throat and are sometimes useful palliatives. Of these the following are recommended:

Acacia:—Forms the basis of many pastilles, and

in the form of "gum drops" may allay a cough due to retention of mucus on the posterior nares or vocal chords.

Bromide of Potash:—10-20 grains in an ounce of water, used as a spray, forms a good sedative.

Chloroform:—A few drops on a sponge or in half a pint of hot water and the vapor inhaled.

Cubebs:—10 drops to half an oz. of water, with a small quantity of magnesia carbonate is sometimes used as an inhalant.

Opium and Morphia:—Enter largely into the formation of cough lozenges, from $\frac{1}{24}$ — $\frac{1}{20}$ gr. of morphia, or $\frac{1}{10}$ gr. of opium, or the extract of opium, is usually in each. Wistar's Cough Lozenges contain powdered opium $\frac{1}{10}$ gr., oil of anise $\frac{1}{32}$, ext. licorice 1 gr.

Oil of Thymol:—1 minim, with oil of anise 3 minims, to half a pint of water and a little carbonate of magnesia is useful by inhalation in cases of cough arising from dilated bronchi.

Terebene:—20 drops on a napkin inhaled daily is especially recommended in chronic winter coughs.

Camphor Chloral:—Painted over trachea is said to allay spasmodic cough.

Tr. Iodine:—Painted on chest affords relief of chronic bronchial catarrh.

Oil of Sandalwood:—6 minims to 1 ounce of water as an inhalant is soothing and may be used in phlegmonous inflammation. (Al.)

Mucilaginous drinks, such as **Flaxseed Tea**, with **Marshmallow**, lemon, decoction of **Iceland Moss**, **Whiskey** and **Glycerine** or **Rock Candy**. Inhalations of **Steam**, **Hot Fomentations** around throat.

Troches:—The following of the Pharmacopœia: **Tannic Acid**, for relaxed throat. **Ammon. Chloride**,

to palliate subacute and chronic inflammation of the throat. **Catechu**, to relieve the huskiness and hoarseness due to overuse of the voice, and for slight pharyngeal and laryngeal cough. **Krameria**, same purpose as tannic acid or catechu. (N.)

CROUP, SIMPLE CATARRHAL.

Steam Inhalations:—Water should be kept constantly boiling in the room, or a tent may be placed over the patient and the steam allowed to enter. (Gn.)

Hot Compresses:—Flannels wrung out in hot water and applied to throat and covered with oiled silk are useful. (Ga.) **Cold Compresses:**—Applied to larynx often effective in the commencement of an attack and will relieve many cases. (Gn.)

Iced Cloths recommended in cases attended with much fever. (Ty.)

Mustard plasters:—As counter-irritants recommended to be always applied. (Ty.)

Hot Foot Baths to the knees have a good effect. (Ga.)

The temperature of room should be between 68° and 75°. Products of illuminating gas are objectionable; gas stoves, therefore, should not be used for croup kettles. (A. W.)

If rhinitis is present it should receive prompt treatment; the following sprays are suggested for this purpose (Pep.):

Menthol:—1–2 per cent. in albolene, or

Cocainæ Hydrochlorat.,	grs. i-ii.
Acid. Tannic.,	grs. v.
Aq. Destill.,	ʒ iv.

Or,

Hgdrogen Peroxid.,	ʒ i.
Glycerin.,	ʒ iii.

CROUP, MEMBRANOUS.

Antitoxin:—As the vast majority of cases on examination show the Klebs-Löffler bacillus, all are suitable subjects for antitoxin. “All cases of laryngeal diphtheria, the patient being two years or more, should receive as follows: 2000 units at the earliest possible moment; 2000 units after 12 or 18 hours, unless there is improvement, and the same dose 24 hours after the second dose if there be still no improvement. Patients under 2 years should receive 1000-1500 units.” (Jac.) “Nowhere is the serum treatment so effective as in these cases; 1000-2000 units should be given at once.” (T. W.)

Calomel Inhalation:—Recommended next after antitoxin. (T. W.) Inhalations under a tent of the sublimated drug. Use 8-10 grs. every hour or at longer intervals. (Jac.)

Lime:—Slaked under a tent decidedly beneficial and very generally recommended, the patient inhaling the steam from the slaking lime. (Jac.)

The following are for constant inhalation from boiling water:

Carbolic Acid, grs. i-iv. (F.)

Oil of Turpentine, 1-5 drops, with glycerine, $\mathfrak{z}\text{i}$, water, $\mathfrak{z}\text{i}$. (F.)

Lime Water alone or with equal parts of water. (L. T.) Not so effective, however, as slaked lime. (Jac.)

Tr. Benzoin Comp., $\frac{1}{2}$ dr. to a pint of water. (L. T.)

Tr. Iodine or Bromine, a few drops of either in the

croup kettle is recommended as sometimes of service. (Gn.)

Cold:—Cold water or an ice bag applied to the neck is sometimes preferable to heat, as the inhalation of steam is not always as beneficial as it appears. (Jac.) There does not seem to be any special indication for the use of cold or heat, each case being a rule for itself; heat may, however, be said to be most generally effective as well as the most grateful.

Papoyotin:—1 part to 10 of glycerine and water may be applied with a brush or spray; Jacobi believes this drug capable of dissolving membranes; other solvents of this nature were formerly much used.

Lactic Acid:—In more or less saturated solutions has been recommended as a solvent of the false membranes, applied with spray or brush. For spray a 4-5 per cent. solution; for the brush somewhat stronger solution. (F.)

The following other remedies are used as sprays:

Hydrogen Peroxide, 1 part to 8-10 of water.

Sulphurous Acid, 50 per cent. solution.

Carbolic Acid, 1 per cent. solution.

Lime Water, pure.

Tannic Acid, 5 per cent.

For other remedies of this nature see Diphtheria.

Intubation and Tracheotomy.

The indications for these measures are a small rapid intermittent pulse, aphonia, cyanosis, and marked retraction of the supra-scapular fossæ and epigastrium with each inspiration. Either should always be performed when the child is suffocating.

Intubation:—In most instances this has displaced tracheotomy. Jacobi says he has not seen a case in

which it would not take its place; moreover, it never renders the latter impossible.

Tracheotomy:—May be preferred to intubation for the purpose of freeing the trachea of the membrane.

CYSTITIS.

ACUTE CYSTITIS:

Hot Fomentations to the hypogastrium and perineum, and **Hot Sitz Baths** should be administered; they are powerful revulsives for abating pelvic congestion and pain, amelioration being sustained for some hours after.

For the relief of pain, suppositories of **Opium** 1 grain, or **Opium** and **Ext. Belladonna**, each $\frac{1}{4}$ gr. (Cl.), or

Morph. Sulph.,	$\frac{1}{6}$ gr.
Cocain. Hydrochlorat ,	$\frac{1}{6}$ gr.
Ext. Belladonn.,	$\frac{1}{12}$ gr.
Ol. Theobrom.,	grs. xlv.

Use every 4 hours until pain is relieved. (T. 96.)

Or,

Ext. Opii Aq.,	gr. i.
Ext. Hydrocyan.,	gr. $\frac{1}{4}$.
Ol. Theobrom.,	gr. xv.

Use every hour until relieved. (B. H.)

Morphia:—Hypodermically, when the suppositories of opium constipate.

Relief of pelvic congestion may be obtained by rest in bed, elevation of pelvis with flexion of the thighs on the body and the knees supported on a pillow, evacuation of bowels, normal cold, saline enema and

counter-irritants over pubes and perineum. Counter-irritation may be applied in the form of small **Blisters** and **Hot Fomentations**, changed every hour, are much better, **Turpentine Stupes** and **Mustard Plasters** may also be employed. (B. H.)

During the stage of decline, if there is a tendency in the disease to become chronic, irrigations of the bladder with mild antiseptic washes, selected with a view of avoiding any irritation are indicated, such as the following:

Potass. Permang., 1-2000.

Creolin, 1-500.

Acid. Boric., 1-100. (B. H.)

CHRONIC CYSTITIS.

Local treatment consists of **Irrigation**, **Instillation** and **Drainage**. (B. H.)

Irrigation is of the greatest service in all chronic forms. For washing out the bladder, Marcy's double catheter with a fountain syringe or Skene's apparatus may be used. In performing irrigation it is of the greatest importance to exclude the air from the bladder; this can be accomplished by causing the patient to retain a small quantity of urine, so that when the catheter is passed, preparatory to the washing, the urine will pass through and fill it, if the bladder is empty the catheter should be first filled. (Cl.)

The normal bladder, it should be remembered, holds from six to eight ounces, but it is rarely admissable to inject more than three or four ounces. Injections should be made slowly, and the irrigating fluid must be at a temperature of 90°-100° F. A few drops of a 4 per cent. solution of cocaine may be instilled into the urethra when there is much irritability.

The following mild solutions are recommended for their cleansing effect rather than for stimulation:

Potass. Permang., 1-5000-1-2000.

Carbolic Acid, 1-500.

Boric Acid, 1-50.

Nitrate of Silver, 1-500.

Normal Saline Solution, 7 per cent. (B. H.)

Other solutions for irrigation, some of which are stronger and stimulating, are as follows (Cl.):

Potass. Permang., 1-250.

Hydrogen Peroxide (15 vol.), $\frac{1}{4}$ to full strength.

Pyrozone, 3 per cent. to full strength.

Aqueous Hydrastis (Ernesty's), $\mathfrak{z}$ i-Oi.

Bichloride of Mercury, 1-2000 to 1-5000.

Borax, $\mathfrak{z}$ i-Oi.

Boric Acid, $\mathfrak{z}$ i-Oi.

Sodium Chloride, $\mathfrak{z}$ i-Oi.

Of the above, the borax solution, according to Carleton, is the best. The following are also recommended

Nitrate of Silver:—In increasing strengths beginning with $\frac{1}{10}$ grain to the ounce and running up to $\frac{1}{4}$ - $\frac{1}{2}$, or even 10-15 grains to the ounce in severe cases where strong solutions are needed. (D. H.)

Nitric Acid:—1 drop to the ounce in cases where the urine is ammoniacal with tendency to phosphatic deposit and formation of calculi. (D. H.)

Guaiacol:—20 per cent. solutions in olive oil; 1 to 2 grains of the injection twice daily; 1 per cent. of iodoform added is said to increase its efficacy. This has been found of benefit in relieving the pain and frequent micturition. (T. 97.)

The following is recommended by Lutand, of Paris:

When pain and inflammation have subsided, an

elastic catheter, to which a syringe is attached, is introduced into the bladder and the following injected:

Boric Acid,	℥j ℥ij.
Biborate of Soda,	℥j grs. xv.
Distilled Water,	Oi ℥xij.

Of this injection one to one and a half ounces according to the irritability of the bladder, are to be injected. This is followed by four and three-quarter ounces of warm water holding the following mixture in solution:

Iodoform,	℥vij grs. xlii.
Glycerine,	℥j ℥ij.
Distilled Water,	℥v.
Gum Tragacanth,	grs. iv. (T. 96.)

The following formula for an irrigating fluid is recommended by Dr. Gouley:

Hydrarg. Bichlorid.,	grs. v.
Ammon. Chlorid.,	grs. xx.
Spts. Gaulther.,	℥ss.
Acid. Boric.,	℥j.
Glycerini,	℥viii.

To one-half ounce of the solution add 7 ounces of warm water (110°) and 2½ ounces of Hydrogen Peroxide. This 10-ounce mixture should be sufficient for four washings.

Nosophen:—4 per cent. solution said to clear the urine in a few days. (Sj.)

Plumbi Acetas:—¼ gr. to the ounce in warm solutions regarded by Sir Henry Thompson as one of the best mild injections when the urine is alkaline.

Acetic Acid:—The following combination is recommended by Sir Henry Thompson for injection after the use of nitrate of silver:

Plumbi Acetat.,	℥ii.
Acid. Acetici Dil.,	℥vi.
Acid. Carbolic.,	℥ss.
Aq. Destill.,	℥iv.

1 drachm of the solution is added to 4 ounces of water and injected once or twice a day. (A.)

Creolin:— $\frac{1}{2}$ per cent. solution has given good results in an obstinate case. (Al.)

Hydrochloric Acid:—When the urine is very alkaline with large amount of phosphates as is often seen in fracture of vertebræ an injection of a solution containing $\frac{1}{2}$ to 1 minim to the ounce may be used. (Al.)

Curettage:—Guyon's method for painful cystitis in the female (19 cures and 10 failures reported) the patient is anæsthetized and the bladder irrigated with boric acid or sublimate solution 1-10,000, a medium sized Volkmann curette is introduced. While the left index finger is pressed against the vesico-vaginal septum as a guide, the instrument is moved over the mucous membrane carefully in the region of the trigone and neck, the usual seat of the disease; the anterior and posterior walls and lastly the urethra are all curetted. A self-retaining catheter is inserted and continued for fifteen to twenty days. No accident is recorded in the above number of cases. (T. 98.)

Dilatation of the Urethra in the Female:—A large percentage of vesical symptoms can be relieved by this procedure. (Sj.)

Instillations:—These are made with an instrument called an instillator, which is a silver or hard rubber catheter about 18 (French) with a fine canal, to the extremity to which a hypodermic syringe of 40 minims capacity is fitted. In applying, the syringe is filled with the selected application, the catheter introduced until it is within the grasp of the compressor urethræ muscle, and the fluid injected along the membranous and prostatic urethra, and into the bladder. Larger syringes may be employed, holding 1-2 drachms. The solutions used in instillation are the following:

Nitrate of Silver:—1-5 per cent., especially useful in gonorrhœal cystitis. **Bichloride of Mercury:**—1-6000-2000. **Iodoform Emulsion:**—10 per cent. (B.H.)

Vesical Drainage:—Indicated when in spite of all treatment the disease progresses and the danger of nephritis is increasing. The simplest and safest form of drainage is by the urethra; this is attained by inserting a soft rubber catheter of medium size, and retaining it. The catheter should be watched to see that the flow of urine is continuous, and changed every forty-eight hours. Mild antiseptic solutions should be used twice daily for irrigating. (B.H.) The other methods for continuous drainage are by perineal and suprapubic incision. For the relative merits of these procedures, see works on genito-urinary surgery.

CYSTS.

Paraffine:—Sometimes used to distend the walls of a collapsed cyst in order to facilitate its removal. It is injected in a liquid state and allowed to cool, thus affording better facility for the dissecting of the cyst walls. (Al.)

DANDRUFF.

(See Pityriasis.)

DERMATITIS HERPETIFORMIS.

Washes are usually more grateful than ointments for soothing the itching and irritation. The following formulæ will be found convenient and useful:

Acid. Carbolic,	ʒ iii.
Glycerini,	ʒ i.
Aq. Destill.,	Oi.

Or,

Ammon. Ichthyol.,	ʒ ss-i.
Ol. Amygdalæ Dulcis,	
Aq. Calcis,	āā ʒ i.

To be rubbed in several times daily and allowed to remain on the surface. (Vn.)

Starch Baths with Bicarbonate of Soda can be used frequently. **Sulphur**:—ʒii-ʒi, according to Duhring, the most valuable of all local applications except in the erythematous form, when it proves irritating. It should be well rubbed in and not smeared on (Vn.)

Thiol:—10 per cent. solutions used twice daily have been successful. (Sm.) This drug is similar to ichthyol in action but has the advantage of being less disagreeable in odor.

Other remedies recommended are **Lassar's Paste**, **Resorcin Ointment**, **Liq. Carbonis Detergens**, ʒii with water ʒviii, **Calamine Lotion**, **Liq. Picis Alkalinus**, and **Tar Ointment**. (J. A.)

It is better to begin with the mildest application and use stronger as the disease advances.

DERMATITIS VENENATA.

Lotio Nigra:—According to Van Harlingen, cloths saturated with this lotion kept constantly applied give very satisfactory results. White says the remedy should not be used over extensive surfaces for fear of absorption or, if used, should only be applied for half an hour, two or three times a day.

Cypripedium:—1 part in 4-5 parts of water is used with success in California. (Boe.)

Grindelia:—A remedy which has given excellent results in the proportion of 2-4 drachms to a pint of water. Apply on cloths thoroughly soaked with the solution and allow them to become almost dry on the skin, then renew; not keeping them, in other words, constantly wet. (Vn.)

The following is recommended by White for use on extensive surfaces in place of the black wash:

Zinc. Oxidi,	ʒiv.
Acid. Carbolic,	ʒi.
Aq. Calcis,	Oi.

Shake well and sop on as often as desired, or when itching causes sleeplessness. (Wh.)

Zinc Sulphate:—Solution of ʒss-ʒi, forms one of the best applications. (F.) Apply on cloths every hour during day. **Washing Soda:**—Sometimes nothing is so effective as this domestic remedy in a solution. (Vn.) **Aq. Calcis:**—Applied with cotton and lint kept constantly saturated will afford prompt relief in many cases. (Ja.) **Salol:**—3 per cent. solutions especially recommended. (M. R. 5, 11, 98.)

Lead Acetate:—An effective remedy, but should be used with caution, if at all, when the skin is broken, as its application is then dangerous. It may be employed as follows:

Liq. Plumbi Subacetat., Dilut.,	1 part.
Aq. Destill.,	3 parts. (B. H.)
Or,	
Liq. Plumbi Subacetat., Dilut.,	ʒi-iii.
Tr. Opii,	ʒii-iv.
Aq. Destill.,	Oi. (Al.)

Burow's solution modified as follows is said to afford particularly good results:

Lead Acetate,	$\bar{3}$ i.
Alum,	$\bar{3}$ iii.
Water,	Oi. (M. R. 5, 11, 98.)

Sodium Hypophosphite:—Recommended by Morrow. It may be applied in a simple solution of 6 drachms to the ounce (Sh) or the following:

Sodii Hypophosphit.,	$\bar{3}$ i.
Glycerini,	$\bar{3}$ ss.
Aq. Destill.,	ad. $\bar{3}$ viii.

This may be applied by lint soaked in the solution and held in place by bandages. (Vn.)

The following will be found of service for children with whom it is difficult to use compresses or bandages. It is indicated when the itching is severe and the skin is broken:

Tar or Oil of Cade,	$\bar{3}$ i.
Collodion,	$\bar{3}$ i.

Or,

Gelatine,	$\bar{3}$ iv.
Glycerine,	$\bar{3}$ i.
Water,	$\bar{3}$ iv.

When applications in the form of ointment are desired, the following:

Acid. Tannici,	grs. xv.
Petrolati,	$\bar{3}$ i.

Or,

Acid. Carbolic,	grs. x-xx.
Hydrarg. Chlorid. Mitis,	grs. x.
Pulv. Amyli,	$\bar{3}$ i.
Petrolati,	$\bar{3}$ i.

(Vn.)

The latter when there is much itching. (Vn.)

Europhen:—10 per cent. in vaseline, after washing the parts in a saturated solution of bicarbonate of soda. (Sj.)

Cold Cream, Zinc Oxide Ointment, or Diachylon Ointment (half strength), also useful. (Ja.)

Astringent powders, viz:

Pulv. Zinc. Carbon. Præcipit.,	
Amyli Oryzæ,	āā ʒi.

Or,

Magnesii Carbon. Levis,	
Pulv. Lycopoḍii,	āā ʒi. (Vn.)

DIPHTHERIA

Antitoxin Injection:—It should be borne in mind that the antitoxin serum in the market is of varying strength, that of each sample being indicated either by the amount required to neutralize a given quantity of normal toxin (German Method), or by its power of counter-acting a unit of toxic strength. (T. 96.)

Dose:—1500–2000 units for the first injection for a child of 2 years in laryngeal stenosis and all severe cases, to be repeated in from 18 to 24 hours; if there is no improvement, a third dose after a similar period if necessary. 1000 units for first dose for severe cases in children under two years and for mild cases over that age, repeated if necessary in from 18 to 24 hours. A second dose is not usually required. The dose should always be estimated in units and not in the amount of serum.

Quality.—The most concentrated strength of an absolutely reliable preparation should be used.

Time of administration.—It should be administered as early as possible, not waiting for confirmation of clinical diagnosis by bacteriological culture. If the case is seen late, injections should be made, unless it is progressing favorably. (T. 97.)

Rules of the Pasteur Institute.—For the use of Roux's serum:

Preventive Action: A dose of $1\frac{3}{4}$ drachms lasts from four to six weeks.

Therapeutic Action: $1\frac{1}{4}$ – $2\frac{1}{2}$ drachms for benign cases at the onset; 4–6 drachms in serious cases, or when they have passed several days, up to one ounce or even more in severe cases; 4–6 drachms when breathing is embarrassed may render tracheotomy unnecessary. If improvement is not satisfactory, inject $2\frac{1}{2}$ –4 drachms more. It is better to inject at the onset a dose stronger than necessary, cutting short the malady, than to inject weak ones at intervals.

For infants under one year, inject 15 minims for each month; for adults, except in extremely severe cases, it is not necessary to inject more than 4–6 drachms for the first time. (Sj.)

Dosage According to Behring.—According to severity of case 600–1000 or 1500 units; this dose may be repeated if the symptoms have not improved within a day. (Jac.) Small doses at intervals, according to Behring, are more serviceable than larger. When the infection is virulent, 600 units is a full dose. (Sj.)

Dosage for Immunization.

1 to 3 months,	50 units.
3 to 4 “	75 “
4 to 6 “	100 “
6 months to 1 year,	150 “
1 to 2 years,	175 “
2 to 4 “	200 “
Adults,	400 “ (T 98.)

Technique :—The skin at the locality of puncture, the syringe, and the hand of the physician should be rendered thoroughly aseptic. The injection should be made into the loose subcutaneous tissue, and not into the muscles; it should always be injected into a part upon which there is no pressure, and in all cases a special syringe should be used which admits of thorough sterilization each time before use. The point of injection should be covered with antiseptic gauze or iodoform collodion.

Local Treatment.

All authorities agree that local treatment is of the greatest importance, and should be commenced immediately, in order to assist in checking the exudation, correcting the foul odors and preventing the reabsorption of the poison. The remedies which have been recommended for this purpose are, as is well known, exceedingly numerous; therefore, only those which have met with more general approbation are mentioned. The removal of the exudate is exceedingly desirable, but all undue irritation of the pharynx by instruments, forcible removal of the membrane, or irritating applications, have been shown to tend to the extension of the diphtheritic exudation and are to be condemned.

Hydrarg. Bichlorid.:—Solutions of this remedy are of great value. When used in the form of a spray, care should be taken that it is not too coarse, lest an excess be thrown on the surface, and cause injurious absorption, when applied for a long period. (F.) It may be employed as an irrigating solution in the strength of 1-3000 or 1-4000 (Al.); as a spray 1-5000 (Bos.) also 1-2000 to 1-10,000; for application with a swab 1-1000, in young children with caution. (Pep). A solution of 1-20 in glycerine has been recommended, preceded by a boric acid spray, and applied two or three times a day with cotton tampons soaked in the solution. Carefully remove all excess to prevent toxic effects. (Sj.)

The following is recommended by Pepper when the bichloride cannot be used:

Acid. Carbolic,

gtts. xii.

Liq. Calcis,

℥iv.

Apply with atomizer every half hour.

Salicylic Acid, in solution of 1-1500 or a saturated solution of **Boric Acid** may be used instead of the bichloride with very young infants. (Pep.)

Hydrogen Peroxide:—Of great service to cleanse and deodorize, used in various dilutions from one-half to one-third. It is especially recommended undiluted as a spray in the laryngeal form of diphtheria. This remedy is objected to on account of its property of coagulating the soluble albumen of the tissues causing pseudo-membranes, which fall off and leave surfaces ready for fresh invasion. It is none the less valuable. Being non-poisonous it is harmless when swallowed, an important factor in the treatment of young children.

Potass. Permang.:—1 grain triturated with one

ounce of sugar of milk and gum acacia, blown on affected part every two or three hours. Application must be very thorough in order to be effective; the powder should be thrown into every accessible part. Before application, the peroxide of hydrogen spray must be used, thoroughly cleansing the parts. All the froth must be carefully removed before the permanganate is applied. This treatment is especially recommended by Goodno. It may also be used as a gargle for cleansing the mouth, grs. iii- $\bar{z}$ i.

Lactic Acid:—One of the best solvents. Mackenzie used 3 drachms of the acid to 10 ounces of water, to be employed as a spray. It may also be used as a gargle, putting sufficient acid in the water to make it taste sour. When employed as a spray take care to protect the eyes. (B.) Applied topically it is highly recommended in 5 per cent. solution, or stronger, according to the effect. (Bos.)

Slaked Lime:—A saucer containing slaking lime placed in the room and the fumes allowed to impregnate the air is especially recommended. It is an old and effective remedy. It is claimed to be decidedly better than lime water sprays to the throat, which are almost without effect. (Jac.)

Thymol:—After septic coagula are removed, this is useful in the proportion of 2-20 grains with 5 grains of carbolic acid to the ounce of water. This may be employed as a spray or gargle. (Al.)

Toluol:—Lœffler has used the following combination, in which menthol seems to deaden the pain of the application :

Menthol,	10 grams.
Toluol, enough to make	36 c. c.
Absolute Alcohol,	60 c. c.
Lib. Ferric Chloride,	4 c. c.

Remove the superficial mucus and apply a swab saturated with the mixture, pressing it firmly for ten seconds over a given spot; repeat this until the whole membrane has been thus treated.

This treatment, it is claimed, gives good results. (T. W.) In a series of seventy-one cases all are said to have been saved; in another series treated after the second day, out of twenty-six one only was lost. (F.)

Liq. Ferri Perchlorid:—1 part to 4 of alcohol applied under illumination with a probe wrapped in cotton; the whole surface of the membrane is touched gently with the remedy. Care should be observed that the solution is confined to the exudation and no injury is done to the parts. This method has some strong endorsements. (Bos.) **Subsulphate of Iron** or the **Tr. of Chloride of Iron** are also used.

Carbolic Acid in proportion of 15 grains to 1 ounce of glycerine and water, as a spray; stronger solutions may be used with a swab. (Ty.)

Iodoform:—Saturated solution in ether, or 5 per cent. suspended in equal parts of glycerine and water are useful preparations.

Potass. Chlorate:—A saturated solution as a simple wash for the mouth. (Ty.)

Menthol:—1 per cent. solution in alcohol, applied by painting by means of cotton wool, three times a day, has given remarkable effects. (T. 96.)

Pyoktanin (Blue):—Saturated solutions have been employed with encouraging results. Applications should be made with a cotton covered probe, and spray to every part of the upper respiratory track. It should be employed early if possible (Gn.)

Solutions of this drug are unstable; keep it in dark glass bottles, and renew every eight days. It is in-

compatible with corrosive sublimate. 3 per cent. solution has also been used.

Nasal Injections and Irrigations:—These can be used to wash the pharynx and tonsils as well as the nasal cavity, and to do away with special treatment of the throat. This is very desirable, as frequently children will not permit the throat to be treated or even open the mouth, without force being used and consequent injurious excitement and disturbance. The following are recommended:

Bichloride of Mercury, 1–3000 or 4000 (Sj.) or 1 part with 35 of salt and 5000 of water. Caution in regard to swallowing in young children.

Boric Acid acts as well as the bichloride, ʒss–Oj (Sj.); it may be used in a saturated solution. **Lime Water**, pure. **Carbolic Acid**, 1 per cent. with caution in giving children lest it be swallowed. **Solutions of Sod. Hyposulphite**. (Jac.)

Warm Saline Solutions:—Useful for cleansing passages, but do not cause the bacilli to disappear as quickly as the bichloride does. Plain warm water will irritate while alkaline solutions will not. (Sj.)

Papayotin:—Valuable, according to Jacobi, for dissolving the membrane. May be injected, sprayed or swabbed on. It is soluble in 20 parts of water, and is used in that strength and stronger, as 1 part to 2 or 4 of water and glycerine. It may be applied to nose and throat or through the tracheotomy tube.

Trypsin:—Recommended as a solvent in place of the above. It acts only when neutral or alkaline. The following has been employed:

Sod. Benzoat.,	ʒi ii.
Sod. Bicarb.,	ʒi iii.
Trypsin.,	ʒi.
Ol. Eucalypti,	ʒi.
Liq. Calcis,	Oi.

Or,

Trypsin.,	grs. xxx.
Sod. Bicarb.,	grs. x.
Aquæ,	℥i.

Make a smooth mixture and apply with a brush or spray.

Another formula with bichloride of mercury is as follows:

Trypsin,	
Sod. Bicarb.,	āā ℥ss.
Aquæ,	℥i.
Hydrarg. Bichlorid.,	gr. ¼.
Glycerini,	℥i.

Warm this mixture and apply with a brush. When the membrane begins to soften, spray every hour with peroxide of hydrogen, 1 part to 6. (Al.) These solvent remedies were formerly much in vogue but have fallen into disuse. (F.)

Myrrh:—The undiluted tincture has been employed with success for painting the throat and tonsils; while for the larynx mixed with glycerine it proves a useful inhalation. (Saj.)

Medicated Steam Inhalations:—Are often of great service, and may be used in many instances with benefit. They may be employed as mentioned under pseudo-membranous croup.

Steam Inhalations:—These are very useful for softening the membrane. They are more useful in tracheo-bronchial diphtheria than in that of the tonsils. (Jac.)

Dusting Powders are of doubtful utility, generally contra-indicated on account of the local irritation, cough and general disturbance caused by their administration. Calomel and perhaps Iodol are exceptions. (Jac.)

Among the numerous other remedies are the following:.

Tr. Iodine, 1-40. Liq. Sodæ Chlorinatæ, 1-20. Sulphurous Acid, 1-10. Condyl's Fluid, 1-40. Sod. Hyposulphite, 30 grs.-1 oz. (Al.)

Guaiacol and Menthol:—The following has proved especially effective as a prophylaxis to be painted on the throat and tonsils:

Guaiacol,	10 parts.
Menthol,	1 part.
Sterilized Olive Oil,	10 parts. (Saj.)

Laryngeal Diphtheria: (See **Membranous Croup.**)

Nasal Diphtheria:—This form of the disease is very apt to terminate fatally unless very energetic treatment is adopted at once. The nose should be persistently and faithfully irrigated or syringed with an antiseptic solution every hour night and day for one or two days. The child should be awakened to have the solution applied. It is fatal kindness to permit it to sleep. (Jac.) Employ the solutions previously mentioned, giving preference to those which are non-poisonous, when there is danger of swallowing.

Sometimes the nostrils are completely occluded by the membrane. In this case a passage must be tunnelled with the probe and forceps; the probe may be tipped with cotton and dipped in carbolic acid. Cocaine may be used. (Gn.)

A glass syringe with a soft rubber mounting in front is the best for administering the injection. When the patient cannot be raised, a nose cup or a spoon may be preferred.

The manner of syringing is very important. It should be applied horizontally, and the fluid should not come out of the same nostril.

Absolute quiet is very essential; all unnecessary furniture and all drapery should be removed. When possible it is well to change the patient's room to prevent reabsorption of the poison. (Jac.)

DYSENTERY.

ACUTE DYSENTERY:

Rest in bed and use of the bed pan is important, as frequent risings are injurious. (Gn.) Starch Injections with 20-30 drops of laudanum after each stool are helpful. Mucilaginous Enemata will often allay tenesmus. Opium Suppositories for pain and tenesmus. Hot Compresses or a large Flaxseed Poultrice, containing about half an oz. of mustard, often acts satisfactorily. (Bt.)

Bismuth and Acacia:—Half a drachm of each with 1 oz. water, injected once or twice daily, according to the severity of the symptoms and retained, is of value in tropical forms. (Al.)

Lysol:—1 per cent. aqueous solution as an enema. (T. 96.)

Irrigation of the Rectum and Colon:—This is the most rational treatment of the severer forms. The large intestines of the adult, it should be remembered, hold about six imperial pints, but not more than three or four should be introduced. (Pp.)

The method of administering recto-colon irrigation is important: the patient should lie on the left side without a pillow, with the hips well elevated; the fluid should be introduced slowly, resting when there is an inclination to reject. When pain is experienced the injections should be discontinued. The plan is en-

tirely safe expect when deep ulcers have formed. (Gn.)

The following are recommended for irrigation:

Sterilized Water. (Gn.)

Boric Acid, grs. x- $\bar{z}$ i. (Gn.)

Quinine, 1-1000 or 1-5000, used by Osler in the amoebic form. (Gn.)

Salicylic Acid, 1-2 per cent. (An.) or 1-300 for children. (Al.)

Bichloride of Mercury, 1-6000. (An.)

Alum, $\bar{z}$ i-Oi. (Pp.)

Tannic Acid, 1-2 per cent. (An.)

Nitrate of Silver, grs. ss- $\bar{z}$ i. (An.)

The irrigations are administered at a temperature of 100°-110° F. though, some of the older writers advocated their use cold. The Germans use iced water injections. If, on account of the irritability of the bowels, large injections cannot be tolerated, as is frequently the case, small ones may be substituted, and the quantity increased gradually. Previous to administration it is often advisable to allay the sensitiveness of the part by small injections of a 4 per cent. solution of cocaine or small enemata of starch and laudanum. (An.)

This method of treatment is little called for in the types of the disease encountered in this part of the country, being more especially indicated in the amoebic or tropical varieties.

Acetate of Lead:—Useful in both acute and chronic forms for the relief of tenesmus; the following may be given by injection:

Plumbi Subacetat.,

Morph. Sulph.,

Aq. Fervid.,

grs. iv.

grs. ss.

$\bar{z}$ i.

DYSENTERY.

CHRONIC DYSENTERY:

Intestinal Irrigation:—The method of administration and the solutions advocated for the acute form of the disease are also indicated in the chronic; the reader is, therefore, referred to the preceding article.

Before use the bowel should be well flushed with tepid water and freed from all fæcal and other irritating matter.

Nitrate of Silver:—Is especially endorsed by many writers when there is ulceration of the bowels; after the cleansing enema, inject by means of a long flexible rubber tube carried up into the colon, using a solution of grs.x-xx-Oj. Care should be observed in inserting the tube so as not to wound the inflamed surfaces. (B.) Another useful solution consists of nitrate of silver grs. xx, tr. opii, gtts. xx-xxx, water Oij, repeated as required. (Sj.) Stronger solutions have been employed. Amelioration follows the third or fourth washing, but a course of sixty are said to be necessary for a cure. (An.) **Sulphate of Copper**, grs. v-x-ʒi, an effective injection for ulceration and inflammation of the rectum. (F.)

Examine the rectum for ulceration.

DYSMENORRHŒA.

All cases are relieved by **Rest** in the recumbent posture. **Hot** applications to the abdomen and **Hot Vaginal Douches**. (K. C.) **Scarification** of the cervix followed by **Glycerine Tampons** and **Hot Water In-**

jections give good results if persistently employed between periods. They are indicated in the congestive variety. (T. 97.)

Galvanism:—Of service in all forms, especially the neuralgic. Cleanse the vagina with hot bichloride solution, 1–2000, and dip the intra-uterine electrode in a stronger solution of the same; the intra-uterine electrode is introduced to the fundus, while the other is placed over the abdominal wall. The positive pole is used if the uterine canal is patulous and the flow too free; when the canal is contracted, the uterus small and flow scanty, the negative. The seance should last about fifteen minutes, and the strength of the current should be from 20–40 milliampères. (KC.)

Spinal Ice Bag, when discharge is scanty; if profuse, **Hot Water Bag**; during intervals, **Hot or Cold Sitz Baths**. (R.)

DYSPHAGIA.

Cocaine:—A very valuable agent for relieving this symptom. In the last stages of laryngeal tuberculosis, a spray a few moments before taking food will enable the patient to swallow with comparative ease. (Al.)

The following is recommended by insufflation instead of cocaine:

Morph. Hydroclorat.,

Sac. Lac.,

Gum. Arabic.,

āā grs. xx.

grs. xv.

Use half a grain before meals.

The effect is said to last many hours. (T. 96.)

Menthol:—10–20 per cent. solution in vaseline as

a spray is especially useful in the dysphagia of laryngeal phthisis. (Al.)

Lactic Acid:—Varying from 10–100 per cent.; begin with a weak solution. It is one of the best topical applications for laryngeal phthisis with ulcers of the vocal chords. Dysphagia is almost always lessened and sometimes ceases after its use. Application is usually made with a brush every other day at first, then daily; a burning sensation may be produced which will continue several hours; this may be relieved by 10–15 per cent. applications of cocaine. (Al.)

DYSPOŒA.

Oxygen Inhalations:—Used when pulmonary and cardiac disease is the cause; often a useful palliative.

Amyl Nitrite:—Inhalations when of cardiac origin with high arterial tension. (F.)

Ethyl Iodide:—According to See this remedy gives prompt and satisfactory relief in the dyspnoea of phthisis. (Al.) The frequency of administration will depend upon the severity of the case, and the duration upon the immediate effects. The average time is about four minutes and the frequency about six times a day. If vertigo is produced the inhalation is too long.

Dry Cups:—Applied to chest and back give temporary relief in acute pulmonary, pleural and cardiac diseases.

Inspiration of Condensed Air:—Beneficial in dyspnoea arising from many forms of disease; namely, laryngeal and trachial stenosis, chronic disease of the bronchi and lungs in all stages, especially the earlier. (F.)

Ice Water:—Swallowed slowly will sometimes relieve spasmodic forms. (Wa.)

EAR-ACHE.

(See also Otitis.)

Hot fomentations of **Chamomile Flowers, Hops or Poppy Heads.** (F.)

Cocaine:—5-10 per cent. solution very effective. (B.)

Atropine:—Grs. iii-v- $\bar{z}$ i. One or two drops in ear is of value, especially when of rheumatic origin. (Al.)

Chloroform:—Insufflation of the vapor sometimes effective. (F.)

The following often afford relief; a few drops on cotton inserted into the ear:

Tr. of Aconite:—Of great value, **Glycerine, Hamamelis, Arnica, Oil of Cloves.** **Opium** in the form of **Laudanum**, or **Morphine** in solution. All these remedies should be heated before applying. (Bt.)

Syringing with hot water at short intervals is effective in some cases. (Bt.)

ECTHYMA.

Local treatment consists first in getting rid of the parasites when present, after which treatment should be on general antiseptic principles. Crusts, if numerous, are to be removed by baths, preferably those containing **Potassium Sulphuret**, or by **Starch Poultices** containing **Boric acid** (see **Acute Eczema**). The parts are then to be cleansed with **Sublimate Soap** or

Carbolized Lotions or Bichloride of Mercury Solutions, 1-1000. The lesions are then dressed with an ointment of **Boric Acid**, $\mathfrak{z}\text{i}$, or **Calomel**, grs. xv., to **Zinc Oxide Ointment**, $\mathfrak{z}\text{i}$. (Vn).

A compress soaked in **Boric Acid Solution** may be applied to the lesions and covered with rubber tissue. (B. H.)

Salicylic Acid:—5-10 grains to the ounce of oil or ointment base acts well. (Ja.)

Ung. Hydrarg. Ammon.— $\mathfrak{z}\text{i}$, with **Ung. Zinc. Oxid.**, $\mathfrak{z}\text{i}$, forms a good antiseptic ointment, or grs. v-x with cosmoline. (Kp.)

Carbolic Lotions:—When ulcers show little tendency to heal, a weak carbolized wash may be used. (Kp.)

Ung. Hydrarg. Ammon.:—20 grains with zinc oxide ointment, 1 ounce (Ja.); or 5-10 grains with cosmoline, 1 ounce, forms an excellent antiseptic ointment. (Kp.)

Aristol, Dermatol, Iodoform, Iodol, and remedies of that class in the form of ointments are all serviceable.

Cod Liver Oil:—May be used externally. (F.)

ECCHYMOSIS.

(See Contusions.)

ECZEMA.

ACUTE and SUBACUTE ECZEMA:

Applications should be of a soothing, sedative character, in the more acute forms; and slightly stimulat-

ing in the subacute; dusting powders, lotions, and ointments are employed. When a remedy is applied for the first time in acute eczema it is better to use it over a limited area, and thus ascertain its effects; for what has suited one case will not answer necessarily for another with the same apparent characteristics. Linen or muslin used for dressings should be disinfected before each application, and care observed that there are no creases or folds when laid on the surface. It should be of the thinnest, softest variety, and if the patient is sensitive to cold a fold of flannel may cover the dressing. (Vn.)

Starch Poultice:—One of the best moist applications. **Potato starch** is preferable; it should be mixed with 5–10 parts of boric acid per 1000, placed in a flat bag, dipped in boiling water and allowed to cool before applying. In some cases the starch may be made into a paste and covered with very fine linen carefully adjusted. No form of treatment, according to Van Harlingen, gives more relief in acute eczema if carefully applied and changed every six hours. In mild cases, or in the later stages, the parts may be covered with a few turns of a soft linen bandage which has been impregnated with a decoction of bran or starch water. (Vn.)

Dusting Powders :

These are of service for the redness, vesication, pustulation, and serous exudation—they may be bland, astringent or sedative.

Corn Starch, Arrowroot and Rice are the most soothing; **Magnesium, Zinc Oxide, Bismuth and Lead Carbonate** the most astringent and sedative. (Sh.)

Corn Starch:—Should be applied at first on all

large surfaces and the parts then covered with linen.

Zinc Oleate:—1 drachm with powdered arrowroot, 1 ounce, indicated when a mild astringent is desired. (Sh.)

Lycopodium, Kaolin, Subnitrate of Bismuth, Dermatol and Talc, each alone, or associated, are useful for isolated patches. (Vn.)

When itching is very severe and obstinate

Camphoræ,	℥ss.	
Zinc. Oxidi,	℥ii.	
Amyli,	℥iv.	(Ja.)

In acute vesicular or erythematous forms water, according to most writers, is irritating; it should, therefore, only be employed for the requirements of cleanliness. **Olive Oil** has been recommended as a substitute for water. Pustular eczema requires washing with soap and water at intervals.

Lotions:

Lotio Nigra:—The following is recommended for the acute vesicular variety, and constitutes one of the best forms of treatment for the majority of cases in the early acute stages: The affected part is bathed with the lotion, full strength or diluted with equal parts of lime water, and covered with cloths saturated with the same. The following which clings to the skin may be substituted for use on the face:

Hydrarg. Chlorid. Mitis,	℥ss.
Mucil. Tragacanthæ,	℥i.
Liq. Calcis,	℥xi.

After the wash has been applied some minutes rub on oxide of zinc ointment, or this,

Pulv. Zinc. Oxidi,	grs. lxxx.
Ung. Aq. Rosæ,	
Vaselini,	āā ℥iv.

Apply gently with the fingers. The treatment is repeated at intervals of a few hours. (Vn.)

Lotio Flava:—May be used with the same indications as lotio nigra. (Sh.)

Liq. Plumbi Subacetatis Dilutus:—Useful in various forms; a pint with half an ounce of glycerine, or with laudanum, two ounces of each to a pint of water. When there is a good deal of inflammation, and the skin is œdematous, a bread poultice mixed with ice cold lead water has a soothing and grateful effect. (Vn.)

Compound Zinc Oxide Lotion:—This remedy, also called **Startin's Lotion**, has the widest range of application; it is as follows:

Zinc. Oxidi,	℥ ss.
Pulv. Calaminæ Præparat.,	℥ iv.
Glycerini	℥ i.
Liq. Calcis,	℥ vii.

Grindelia Robusta:—Suitable for the treatment of large surfaces, half an ounce of the fluid extract to a pint of water. Apply with cloths and allow to remain on until quite dry. (Vn.)

Carbolic Acid:—One of the most effective antipruritics, though rarely adapted to the acute stage; but when itching is intense and burning is not a prominent symptom it may be used with good effect either as a simple lotion in the strength of a drachm to a pint of water (Sh.), or in combination with black wash, as follows:

Acid. Carbolic,	℥ ii-iv.
Glycerini,	℥ i.
Lotio. Nigræ,	Oj.

These applications are more adapted to the erythematous varieties, when the skin is unbroken and there is inflammatory infiltration. (Vn.) In these conditions weaker solutions of carbolic acid will also give good results.

Glycerine:—Alone will prove irritating, but diluted with three parts of water will form an agreeable application. (Vn.)

Zinc Sulphate:—Grs. xv—xxx— $\bar{z}$ i, sometimes very useful for application on the hands. (Vn.)

Cloths wrung out in **Hot Water** and applied very hot in quick succession will often allay the itching when other remedies have failed.

Alum:—In the form of Burow's Liquor, is useful. When there is intense œdema and loss of serum, to the extent of causing weakness, use 5–10 parts with 100 of water on compresses, renewing every three hours. (Kap.)

Boric Acid, Sodium Carbonate, Sodium Hyposulphite and Sodium Sulphite, all in the proportion of one drachm to a pint of water, are also used as lotions.

Nitrate of Silver:—Sometimes a solution of 3–10 grains to the ounce painted on moist patches will act satisfactorily. (Ja.)

Ointments.

As a rule, ointments do not agree with acute eczema as well as lotions, yet there are cases in which they are preferable. **Cold Cream, Cucumber Cream**, alone or with arrow root, and **Glycerite of Starch** are the most bland.

Zinc Oxide:— $\bar{z}$ i— $\bar{\theta}$ iv, with cold cream $\bar{z}$ i, is very soothing, and better than the ordinary zinc ointment, which is apt to be too hard. (Sh.)

Ung. Zinc. Benzoat:—This is one of the best remedies after the acute stage (Ja.), though disapproved by some writers. (Vn.)

Lassar's Paste (see Appendix II).—Indicated when there is much discharge, as in pustular and weeping

eczema. 10–15 grains of salicylic acid may be added to increase its antipruritic effect. (Ja.)

Diachylon Ointment:—This should be prepared with great care, as improperly made it is harmful. The method of preparation is as follows: Olive oil $\bar{\text{z}}\text{xv}$, powdered litharge ziii-vi , water a sufficient quantity. The oil is to be mixed with one pint of water and heated by a steam bath to boiling, the finely powdered litharge is sifted in and stirred continually; the boiling is to be continued until the minute particles of the litharge have entirely disappeared. During cooling, a few more ounces of water are to be added from time to time, and when completed water will remain in the vessel. The mixture is to be stirred until cool. When properly prepared, the ointment should be yellowish gray and of the consistency of butter. It is best applied on cloths and covered with oiled silk for cleanliness. (Vn.)

Menthol:—5–20 grains in an ounce of zinc ointment is useful to allay itching. (Al.)

Alummol:—10–20 per cent. ointments are recommended by Bulkley.

The following forms an excellent soothing application:

Zinc Oxide,	$\bar{\text{z}}\text{ij.}$
Salicylic Acid,	grs. x.
Starch,	$\bar{\text{z}}\text{ii.}$
White Vaseline,	$\bar{\text{z}}\text{iv. (Kp.)}$

Zinc Oleate:—Combined with equal parts of olive oil, or with equal parts of ung. aq. rosæ with a little almond oil, is often valuable. (Vn.)

Bismuth Oleate:—The following, known as **McCall Anderson's Ointment**, is an elegant combination:

Bismuth. Oxidi,	$\bar{\text{z}}\text{i.}$
Acid. Oleici,	$\bar{\text{z}}\text{i.}$

Ceræ Albæ,	℥ iii.	
Vaselini,	℥ ix.	
Ol. Rosæ,	M ii.	(Vn.)

Bismuth Subnitrate:—As a mild astringent and sedative is especially valuable in acute eczema of the scalp in children, as follows:

Bismuth. Subnitrat.,	℥ ss-i.	
Ung. Aq. Rosæ,	℥ i.	(Vn.)

Salicylic Acid:—In strengths varying from 2–20 per cent., with lanolin, vaseline or water, is satisfactory in subacute erythematous varieties when confined to small areas. This remedy is also effective in weak solutions in vesiculo-pustular forms, but its best results are seen in eczema rubrum and eczema squamosum when there is considerable fissuring. (F.)

Xeroform:—A 10 per cent. solution will check the discharge in eczema madidins and impetiginosum. (F.)

Picric Acid:—Saturated solutions painted on the part have been highly praised in acute and subacute eczema. (T. 98.)

Potass. Permang.:—1–2 per cent. or stronger solutions have been recommended by Bulkley in patches of subacute forms.

In Eczema Intertrigo.

The following will prove useful:

Bismuth. Subnitrat.,	℥ iv.	
Zinc. Oxidi,	℥ i.	
Pulv. Amyli,	℥ ii.	
Acid. Carbolic,	M v-xv.	
Vaselini vel. Ung. Aq. Rosæ, q. s. ad.	℥ i.	(B. H.)

Or,

Thymol.,	gr. i.	
Pulv. Zinc. Oleatis,	℥ i.	(Ja.)

Or,

Acid. Salicylici,	grs. x.
Pulv. Amyli,	
Bismuth. Subnitrat.,	āā ℥iii.
Ung. Aq. Rosæ,	q. s. ad. ℥i. (B. H.)

CHRONIC ECZEMA:

In some cases the treatment employed for the acute form will also be applicable to this type of the disease, but as a rule more stimulating remedies will be found necessary.

Tar:—This remedy is largely employed. It is indicated in the squamous form, and when the disease has become decidedly chronic with more or less infiltration. If applied when not indicated it will irritate and retard recovery. Mild preparations should be used first and increased in strength as indicated. The two forms of tar commonly employed are **Pix Liquida** and **Oleum Cadini**. The following formulæ are suggested:

Ol. Cadini,	℥ss-i.
Zinc. Oxidi,	℥ss-i.
Ung. Aq. Rosæ,	℥i.

Or,

Ol. Cadini,	℥i.
Ung. Zinc. Oxid. Benzoat.,	℥i.

Pix liquida may be substituted in the above for the **oleum cadini** in double the strength. (Ja.)

Oleum Rusci:—Effective but is difficult to obtain. It may be used in the proportion of 1–2 drachms to the ounce of Ung. Aq. Rosæ. (B.H.) Another excellent way in which to use tar is that of the strong tincture, 2 parts to 1 of alcohol. Paint the diseased surface with about three coats, allowing each coat to dry before the other is applied; then cover with oxide

of zinc ointment, which should be changed every morning. (Ja.)

The following is recommended in old patches to be rubbed in with a mop:

Picis Liquid.,

Sapo. Virid.,

Alcohol.,

p. e. (Vn.)

In very chronic thickened varieties tar has been recommended to be used pure, dissolved in olive oil if the lesions are extensive. Caution must be observed lest poisonous effects be produced.

Compound Tincture of Mineral Tar (Coal tar, 1 part digested with 6 parts of tincture of quillaia, with frequent agitation for not less than eight days, preferably longer; then filtered):—This is an excellent preparation in which to employ tar in a liquid form, especially in dry eczema of the scalp in adults. It should be used in the strength of 3–20 minims to the ounce of water. (T. 98.)

Tar Baths:—Are advised by Lassar for the purpose of disinfecting the skin; after the bath the surface is dusted with Venetian talc. (T. 97.)

Wilkinson's Ointment:—Advised by Lassar in obstinate forms. It consists of equal parts of sulphur and oleum rusci, 1 part; prepared chalk $\frac{1}{4}$ part; soft soap and vaseline, 2 parts. (T. 97.)

Carbolic Acid:—A very valuable agent, especially serviceable as an antipruritic. It will often allay itching when other remedies have failed, and may be used in the form of an ointment: 5–20 grains to the ounce of base, either benzoated lard or zinc oxide ointment. (Vn.)

Thymol:—An ointment of 10 grains to the ounce and upward is used. (F.)

Thioform:—10 per cent. salves are strongly recommended in moist forms. (T. 96.)

Sulphur:—A very useful remedy, especially when the surface is moist. It is indicated in pustular eczema of the hands, in chronic eczema rubrum occurring in patches, and when it is desired to renew the epithelium of the skin by its cornifying powers. It may be employed in the strength of 1–2 drachms to the ounce of vaseline or cold cream, but should be used mild at first and gradually increased in strength. A combination of sulphur and tar has good effect in old chronic cases attended with much itching and infiltration. (Vn.) It is regarded by some writers as next to tar in efficacy, forming one of the best stimulating remedies. It is not, however, as reliable, and in some persons causes considerable dermatitis.

Sapo Viridis:—Often of the greatest service, especially in eczema rubrum of the leg and other parts where there is extensive infiltration. It should be rubbed in thoroughly by means of a piece of flannel, until there is considerable smarting and copious serous discharge. The soap is then washed off with warm water, the parts well dried, and a soothing ointment, such as diachylon, applied. The procedure is repeated daily, and is effective in this form of the disease. (Vn.)

Lassar's Paste: (see Appendix II. for formula.)—May be useful in some cases but is better for the acute.

Vasogene or Oxygenated Vaseline:—Made by boiling vaseline with 4 per cent. of nitric acid, washing away the excess of acid and cooling, has given very satisfactory results in dry and weeping eczema. (T. 98.)

Salicylic Acid, Salol or Resorcin:—In strength varying from 20–60 grains to the ounce of ointment base, useful when there is more infiltration than inflammation. (T. 98.)

Bassorin Paste:

Bassorini,	℥ x.
Dextrini,	℥ vi.
Glycerini,	℥ ii.
Aquæ,	q. s. ad. ℥ xxvss. (B. H.)

Ichthyol:—Varying strengths are used to reduce the thickening in old cases. (F.)

Thiol:—As a substitute for ichthyol, to which it is very similar but free from odor, 2–15 per cent. ointments, and 50 per cent. solutions. (T. 96.)

Resorcin:—2–5 per cent. ointments are useful as mild stimulants in lotions or ointments. For erythematous eczema the following:

Resorcini,	grs. x–xv.
Glycerini,	M x.
Liq. Calcis,	℥ i.

Apply to the part three or four times daily until itching and burning cease, and the inflammation lessens. (T. 98.)

Caustic Potash:—10–40 grains to the ounce may be advantageously employed in old infiltrated cases and in eczema of the palms. The application should be mopped on, the parts then bathed with cold water or covered with cold water compresses, and after a while with soothing ointments. This procedure is heroic as well as effective, and must be used with care. It should never be used more than once or twice a week, and never intrusted to the patient for applicaiton. (Vn.)

A preparation introduced by Bulkley called **Liq. Picis Alkalinus** is the following:

Picis Liquidæ,	℥ii.
Potass. Causticæ,	℥i.
Aq. Destill.,	℥v.

This is to be diluted with from two to eight parts of water.
(B. H.)

Mercurial Ointments:—Valuable when the disease is limited, but should not be used over extensive areas for fear of absorption.

Some of the preparations in use are as follows:

Hydrarg. Chlorid. Mitis,	grs. x-xxx.
Ung. Zinc. Oxidi,	
Ung. Petrolei,	āā ℥ss.

Or,

Hydrarg. Oxid. Rubr.,	grs. v-xxx.
Vaselini,	℥i. (Vn.)

Rubber Protective:—For the reduction of infiltration and the removal of scales, nothing is better for a limited period. A piece of rubber is applied to the part, and bound down with a roller bandage. It should be removed once a day, sponged with a solution of soda in water and reapplied. This plan affords great relief to the itching. As soon as infiltration is reduced the tar remedies are indicated. (Ja.) **Martin's Solid Rubber Bandage** is of great service in varicose eczema rubrum. The bandage should be worn during the day only, and on removing at night the limb should be bathed in hot water, dried and dusted with starch powder, and loosely covered with linen for the night. (Vn.)

Ihle's Paste:—A well known and useful application is the following:

Resorcini,	grs. x-xx.
Zinc. Oxidi,	
Pulv. Amyli,	
Lanolini,	
Vaselini,	āā ℥ii. (B. H.)

Plasters:—The mull and salve plasters of Unna being now obtained in this country can be used with good effect. They are, however, expensive and liable to become rancid. A substitute in eczema is

Pick's Salicylated Plaster:

Emplastri Saponis	℥ iiss.
Ol. Olivæ,	℥ v.
Acid. Salicylici,	grs. xxxvii.

Duhring recommends for a 5 per cent. plaster:

Emplastri Saponis,	℥ j.
Ol. Olivæ,	
Acid. Salicylici,	ãã grs. xxiv.

For a 10 per cent. plaster, omit the olive oil.

Hardaway uses lead plaster 61 parts, powdered soap 4 parts, and water sufficient to form a paste with the soap. Add the lead and evaporate to proper consistency. Then add vaseline 30 parts, salicylic acid 5 parts, and mix with gentle heat. The salicylic acid may be increased if necessary.

These plasters are especially indicated in infiltrated varieties of eczema. After the thickening has been removed, the salicylic acid may prove injurious, in which case it should be replaced by simple ointments or pastes. (B. H.)

Gelatin Preparations:—These were recommended by Pick as a vehicle for other remedies and as a protective. The following are among the best of the numerous formulæ (Pick's Gelatin):

Gelatinæ,	℥ iv.
Zinc. Oxidi,	℥ iiss.
Glycerini,	℥ ss.
Aquæ,	℥ vi.

Heat the water, dissolve the gelatine in it, then add the glycerine and zinc; stir until cold.

For use the liquid jelly is heated in a hot water bath and painted on. One-half per cent. of ichthyol or any other remedy used in disease of the skin, except lard, may be added if desired. (B. H.)

Gelanthum:—Introduced by Unna and modified by Skinner, this is as follows:

Tragacanthæ,	3 iiss.
Gelatin. Opt.,	3 ii.
Glycerini,	3 vi.
Thymol.,	gr. ¼.
Aq. Destill.,	q. s.

Place the tragacanth and glycerine in a covered jar containing ten ounces of water and add enough to make twelve ounces. (B. H.)

Jamieson's Gelatine:

Gelatine,	15 parts.
Zinc Oxide,	10 parts.
Lard,	10 parts.
Glycerine,	65 parts.

Heat together in a hot water bath, and add 2 per cent. Salicylic Acid. Apply with a brush. (Vn.)

Pigments:—Various remedies are added to colloidion or liquid gutta percha, thus constituting a pigment. In small thickened patches of eczema **Salicylic Acid** and **Chrysarobin**, of each 5–10 per cent., are valuable, and in eczemas about the mouths of children **Tar** similarly combined is often useful:

Ol. Cadini,	3 i.
Collodii (vel. Traumaticini),	3 i. (B. H.)

ECZEMA IN CHILDREN:

Treatment is generally on the same lines as that for adults. When the face is the seat of the disease, it should be covered with a light linen mask held in

place by being fastened to a skull cap. The ointments should be spread on cloths and the mask put on over them. Suitable openings must be made for the nose, mouth and eyes.

All parts of the skin which are in apposition should be kept separated by folds of lint. Scales should be removed as directed for eczema of the scalp, after which the selected remedy may be applied.

Kaolin, Zinc Oxide, Bismuth Subnitrate are suitable dusting powders for the erythematous variety; **Starch** may also be used, but boric acid must be added to prevent caking and consequent irritation.

Black Wash and Dilute Lead Water are often of service.

Boric Acid, in powder or an ointment, 1 drachm to vaseline 1 ounce. (Vn.)

For obstinate cases of the scaly type:

Tar,	
Alcohol,	
Green Soap,	equal parts.

Or,

Oil of Cade,	1 part.
Olive Oil,	1 part.
Lanolin,	10 parts.

Or,

Zinc Oxide,	1 part.
Ammonia Hydrate,	1 part.
Oil of Almonds,	1 part.
Tar,	10 parts. (Jac.)

The following are for use in the vesicular and vesiculo-pustular forms:

Pulv. Zinc. Carbonat.,	3i.
Ung. Cucumis,	3i.

Or,

Bismuth. Subnit.,	3i.
Ung. Aq. Rosæ,	3i. (Vn.)

Balsam of Peru:—1–30 in vaseline; apply at night. (T. 96.)

In mild chronic conditions:

Picis Liquidæ,	3 ss.
Pulv. Zinc. Oxidi,	3 ss.
Ung. Aq. Rosæ,	3 i.

Or,

Sulphur. Præcipit.,	3 ss-i.
Picis Liquidæ,	3 ss-i.
Ung. Zinc. Oxidi,	3 i.

Or,

Ol. Cadini,	3j.	
Collodii,	3 i.	(Vn.)

Nitrate of Silver:—10–40 grains to 1 ounce gives good results in chronic cases of the squamous and crustaceous variety. (Jac.)

The nails should be kept cut short in order to prevent scratching.

ECZEMA OF REGIONS.

Eczema of the Anus.

The treatment is generally the same as that of the infiltrated variety in other localities. The parts should be washed with **Ichthyol** or mild **Sublimate Soap**, and the following applied:

Acid. Boric.,	3i.	
Cocainæ Hydrochlor.,	3i.	
Lanolini,	3 i.	(Vn.)

Tar or Diachylon ointments may be applied, and covered with dusting powder. (Ja.)

A formula for a tar ointment to be preceded by a 5 per cent. application of cocaine for the relief of the pain, is as follows:

Picis Liquidæ,	℥i.	
Medullæ Bovis,	℥vi.	
Ceræ Albæ,	℥i.	
Ol. Rosæ,	M v.	(Vn.)

Salicylic Acid:—A 15 per cent. solution to 1 ounce of flexible collodion is often followed by good results. (Ja.)

Hot Water:—Bulkley recommends the following: A soft cloth dipped in water as hot as can be borne is pressed against the anal region for a minute, and repeated three times; then dry and apply the following ointment:

Zinc. Oxidi,	℥i.
Pulv. Amyli,	℥ii.
Ung. Picis Liq.,	℥ii-℥iv.
Ung. Vaselini Plumbici,	q. s., ad ℥i.

Before using the fomentation the salve is made ready for application by spreading it on lint.

Duhring uses this formula:

Sulphur. Præcipit.,	℥ii.
Naphthol.,	℥i.
Morph. Sulph.,	grs. ii.
Zinc. Carbonat.,	℥i.
Ung. Aq. Rosæ,	℥i.

Carbolic Acid:—20 per cent. in almond oil rubbed in with the fingers at night will give relief even when the surface is fissured and abraded. (Vn.)

Rubber Sheeting or protective worn in the form of a T bandage for a few days will be useful when there is much infiltration. (Ja.)

Penciling with solutions of Nitrate of Silver, and applications of Potash or Coal Tar, may also be employed in the same condition.

Scarification is sometimes effective in exceedingly obstinate cases. (B. H.)

The parts should be kept as clean as possible, and the fold of the nates separate by a layer of lint.

Eczema of the Auditory Meatus.

Accumulations of wax and epithelium should be removed by syringing with warm solutions of **Borax** or **Carbonate of Soda** as directed under the head of **Impacted Cerumen**.

Hydrogen Peroxide:—Recommended for cleansing. (T. 98.)

Boric Acid, by insufflation, **Tannic Acid** $\text{ʒi}-\text{ʒi}$, or **Nitrate of Silver** grs. $\text{x}-\text{xx}-\text{ʒi}$ applied by means of absorbent cotton on a probe, with the ear properly illuminated, are useful to allay the itching. (Bac.)

Potassa:—When there is much infiltration, a solution of 10 grains to the ounce may be applied with a camel's hair brush carefully stripped of all excess of the solution before introduction, so that not a drop will run down to the tympanum. (Vn.)

Cold Cream:—Is useful after application of nitrate of silver if there is much oozing. (Bac.)

Ichthyol:—25 per cent. ointments in acute and erysipelatous varieties. (T. 98.)

Calomel:—Grs. $\text{v}-\text{x}-\text{ʒi}$ as an ointment in dry and irritable forms. (T. 98.)

The following acts well:

Acid. Salicylic.,	gr. i.
Tr. Benzoin.,	gtts. ii.
Ung. Aq. Rosæ,	ʒi. (Bac.)

Hydrarg. Oxid. Flav. or Resorcin:—2–5 per cent. ointments in sluggish cases. (T. 98.)

Acetum Cantharides applied with caution is sometimes effective. (Bac.)

The following has been suggested by Van Harlin-

gen for the patient to use during the intervals of treatment by the surgeon:

Acid. Carbolic (crys.),	
Zinc. Sulphat.,	āā grs. xii.
Glycerini,	ʒ iii.
Aq. Rosæ,	ad ʒ xii.

Syringe the ear once or twice a day.

Eczema of the Beard.

In the acute pustular variety soothing applications are indicated. **Carbolized Oil, Lime Water** or **Diluted Black Wash** may be used for bathing the affected parts, after which **Cold Cream** or **Vaseline** may be applied. The hairs should be closely clipped, and as soon as the acute stage has passed, daily shaving should be required, or shaving at least every other day.

Ung. Vaselini Plumbici.—Spread on muslin should be applied after shaving.

Epilation of hairs situated in the pustules should be practiced when the disease has become chronic, followed by ointments.

The following is for use in the squamous form:

Hydrarg. Ammoniat.,	grs. xx.	
Lanolini,	ʒ i.	(Ja.)

For chronic varieties (Rosenthal's paste):

Acid. Tannici,	ʒ i.	
Sulphur. Præcipit.,	ʒ ii.	
Zinc. Oxidi,		
Amyli,	āā grs. cl.	
Vaselini,	grs. clx.	(B. H.)

Eczema of the Breast and Nipple.

Wash the nipple carefully, using as little water as

possible, dry with a soft handkerchief and dress with **Zinc or Diachylon Ointment**. It is obvious that this must be removed before nursing. (Ja.)

Rubber nipples are useful to wear while nursing when there are cracks in the nipple. After drying, painting with **Tr. Benzoin Comp.** or **Tr. Myrrh** is often effective. (B. H.)

Lister's ointment for fissures:

Acid. Borici,	
Ceræ Albæ,	āā grs. xv.
Paraffini,	
Ol. Amygdalæ,	āā ʒss.

Wash the nipple with borax 1 to 25 and apply on muslin.

Borax:—Useful as an ointment as well as for cleansing.

Thymol with Powdered Zinc Oleate, a drachm to the ounce, for eczema under the breasts. (Ja.)

Nitrate of Silver:—In solution of grs. xvi-ʒi or the crayon for touching the cracks. (B. H.)

No poisonous application should be used.

Eczema of the Ears.

When the disease is situated on the outer part of the ear, the same general line of treatment mentioned for the disease in other localities is for the most part applicable. In applying the dressing care should be observed to cover every part and furrow. A pledget of lint should be placed behind the ear, so that it will be constantly kept separated from the side of the head while sleeping. **Lotio Nigra** may be used first. **Compressed Oxide of Zinc Lotion** also of service. These remedies are specially indicated in the vesicular form.

Zinc Oxide Ointment:—According to Bacon, is usually all that is required.

Diachylon Ointment:—Suitable to some cases. (Bac.)

Ung. Vaselini Plumbici:—Containing 1 per cent. of carbolic acid, if there is much itching in subacute and chronic conditions. (B. H.)

Salicylic Acid:—A 5 per cent. solution when there is much infiltration will quickly reduce it. (B. H.)

Sapo Viridis:—When there is a deep crack of long standing behind the ears, may be rubbed in briskly and followed by tar or calomel ointment ʒi-ʒi , or by equal parts of *pix liquida* and ung. zinc oxide. (Vn.)

Nitrate of Silver—Grs. v-x- ʒi painted on in the moist forms. (T. 98.)

The ear may be covered during the day with a linen bag made like a little ear muff.

Eczema of the Eyelids.

Weaker applications are to be employed than are used on other parts. **Glycerite of Starch**, **Diachylon Ointment**, **Oxide of Zinc**, or **Acetate of Lead** cerates, or dusting powders of **Starch** alone or mixed with powdered **Oxide of Zinc** in the proportion of 1 of the latter to 3 or 4 of the former, should be used in the acute varieties. (N. O.)

Nitrate of Mercury:—The officinal ointment diluted with 3-6 parts of cold cream, or the **Red Oxide of Mercury**, 10 grains, to cold cream 1 ounce, form very useful applications for mild cases. (Vn.)

Aristol:—Has been highly praised. (N. O.) An ointment of 5 grains to 1 drachm of cosmoline has been found effective.

The following is said to be excellent:

Acid. Salicylici,	grs. x.
Ung. Hydrarg. Oxid. Rubr.,	ʒi .
Ung. Aq. Rosæ,	ʒvi . (Ja.)

Hydrarg. Oxid. Flav.:—Grs. ss—iv, vaseline $\mathfrak{z}\text{i}$, sometimes known as Pagenstecher's ointment; it may be worked in over the eyelids. (Al.)

For severe cases the eyelashes should be extracted, the edges of the lids carefully dried and touched with a camel's hair brush moistened with a solution of **Caustic Potassa** grs. x— $\mathfrak{z}\text{i}$. This application should be wiped away immediately and cold water applied. Applications may be made daily until infiltration, exudation and itching are relieved, when a stimulating ointment such as the **Yellow Oxide of Mercury** as above may be used. (Vn.)

Eczema of the Face.

Crusts when present should be removed by soaking in **Olive Oil** or the **Ung. Vaselini Plumbicum**, applied with strips of muslin. (Hd.)

Black Wash and **Lime Water** are of decided benefit. (Vn.)

Soothing applications should be employed such as the following, which are indicated in the erythematous variety:

Zinc. Oxidi,	$\mathfrak{z}\text{ss.}$
Pulv. Calaminæ Præparat.,	$\mathfrak{O}\text{iv.}$
Glycerini,	$\mathfrak{z}\text{i.}$
Aq. Calcis,	$\mathfrak{z}\text{vii.}$

Or,

Zinc. Oxidi,	$\mathfrak{z}\text{ss.}$	
Mucilag. Acaciæ,	$\mathfrak{z}\text{i.}$	
Emulsion Amygdalæ,	$\mathfrak{z}\text{ii.}$	
Aq. Rosæ,	ad. $\mathfrak{z}\text{iv.}$	(Hd.)

The following ointment is described as of great general utility:

Zinc. Oxidi,	3i.
Pulv. Amyli,	3ii.
Ung. Picis Liq.,	3i-ii.
Ung. Vaselini Plumbici,	q. s. ad. 3i.

Spread on muslin and retain in position with a linen mask.

(B. H.)

Squires' Glycerole:—This preparation is as follows:

Glycerol. Plumbi Subacetat.,	3ss.
Ung. Aq. Rosæ,	3i.
Ceræ Albæ,	q. s. (Hd.)

The following called Provan's Paste is for protecting the parts when the patient desires to remove the applications and go out:

Tragacanthæ,	
Glycerini,	āā 3ss.
Sod. Biborat.,	3ss.
Aq. Destill.,	q. s. (Hd.)

This forms a thin varnish which protects the skin from the air and which can be easily washed off.

Zinc Oleate:—As a dusting powder for protection after the use of pastes. (Hd.)

Acetanilid:—With cold cream, 3ii-iii-3i. (T. 98.)

Carbolic Acid:—Especially useful for the itching; may be used when the disease is at its height:

Acid. Carbolic,	3iii.
Glycerini,	3i.
Lotio. Nigræ,	Oi. (Vn.)

Diachylon salve on mull useful for chronic eczema of the forehead. (Hd.)

Liq. Carbonis Detergens:—1 part to 8 of water or stronger is excellent. (Vn.)

When ointments agree well the following will be found satisfactory:

Picis Liquidæ,	3ss-3i.
Ung. Aq. Rosæ,	3i. (Vn.)

Salicylic Acid Plaster:—5 per cent. in chronic cases is of great value. (Hd.)

For the healing of cracks and fissures:

Ol. Cadini,	3i
Liq. Guttæ Perchæ,	
Seu Collodii,	3i.

Eczema of the Genitals.

The parts should be kept separated by layers of linen, and in the case of males the genitalia should be wrapped in fine soft linens. In acute cases soothing remedies should be employed, such as Zinc and Calamine, Lead Water, Black Wash, and Lotions of Grindelia.

Medicated Baths:—In acute and superficial forms these will give relief. A bath may be prepared as follows: Potass. carb., ʒiv.; sod. bicarb., ʒii.; pulv. boracis., ʒii. Mix, dissolve in a quart of water and add 4–6 ounces of dry starch; this is to be well stirred through the water, then 6–8 ounces of glycerine added, and the whole mixed with 30 gallons of warm water. The patient is to remain in the bath 15 to 20 minutes; on removal dry thoroughly and dust on Bismuth Subnitrate, or apply some bland ointment. (Vn.)

When the disease is chronic, and there is much infiltration with scaling, more stimulating treatment is required, such as the following: Green Soap with friction, or Salicylic Acid in Alcohol ʒ–ʒiv, afterward applying Ung. Vaselini Plumbicum, or Salicylic Acid Plaster 5 per cent. strapped on, Vleminckx's Solution, pure or diluted, Wilkinson's Ointment, or painting with Caustic Potash, grs. xx–ʒi. (B. H.)

For the itching:

Acid. Carbolic,	℥ iii.
Glycerini,	℥ i.
Aq. Destill.,	℥ i.

This is particularly useful in females, and is best preceded by applications of hot water.

Nitrate of Silver:—A solution in nitrous spirits of ether painted on is useful for itching of the scrotum. (Vn.)

Lead Liniment forms a good application. (F.)

For eczema of the vulva the following is commended: **Bran Water** with **Boric Acid** during attack; in the intervals **Salicylic Acid Paste**, or **Carbolic Acid Lotion** 1 part, **Balsam Peru** 4 parts, oil of **Sweet Almonds** 400 parts; dusting powder freely used. **Sitz Baths** morning and evening. (T. 97.)

Eczema of the Hands and Feet.

Calamine and Zinc Lotion alone, or with **Carbolic Acid**, 5-10 drops to each ounce of lotion, affords relief to the acute vesicular variety. (B. H.)

Zinc and Tar:—Useful after the disappearance of the more acute symptoms, which leave the parts red and somewhat scaly, viz:

Ung. Picis Liq.,	℥ ii.
Zinc. Oxidi,	℥ i.
Ung. Aq. Rosæ,	℥ vi.

In subacute and popular eczema:

Bismuth. Subnit.,	℥ iv.
Zinc. Oxidi,	℥ i.
Pulv. Amyli,	℥ ii.
Acid. Carbolic,	M x-xv.
Vaselini,	℥ i. (B. H.)

Or,

Litharge,	10 parts.
Glycerine,	30 parts.
Starch,	10 parts.
Vinegar,	60 parts.
To be reduced by boiling to 80 parts. (T. 98.)	

Green Soap:—In chronic cases, when there is horny thickening of the palms, more vigorous treatment is required. Green soap spread on cloths covered with a rubber bandage may be applied and retained night and day until the epidermis is softened and reduced in thickness, then stimulating ointments of tar and sulphur should be used. (Vn.)

Caustic Potash:—Same indications as for green soap. 20–40 per cent. solutions applied by the physician himself; the hands should be first soaked in water as hot as can be touched, then a mop dipped into the solution should be rubbed on the parts. If the burning is considerable, wash with cold water and apply the following:

Hydrarg. Ammoniat.,	℥i.
Adipis,	℥ss.
Sevi Benzoat.,	℥ii.
Ol. Amygdalæ Dulcis,	M x.
Ung. Petrolei,	℥vi.

The above is to be applied on cloths and covered with wax paper. This treatment may be employed daily until the cracks and fissures heal and the skin assumes a healthy appearance. Then the potassa is discontinued and weak tar ointment applied, ℥i–℥i. (Vn.)

Salicylated Plasters:—For softening the horny epidermis have a very good effect; they are moulded to the skin and allowed to remain on for from twenty-

four hours to several days, when they become loose. The horny epidermis is scraped away and ointments applied. (Kap.)

Gelanthum:—For dry eczema with marked thickening, as a vehicle for **Salicylic Acid**, **Ichthyol**, **Resorcin**, **Chrysarobin**, or **Tar** to replace ointments. It is more agreeable. (F.) (See Acute Eczema.)

Thymol and Zinc Oleate:—These remedies, mixed in the proportion of 1 part of the former to 8 of the latter, form a powder which is more useful than ointments when the disease is situated between the toes. (B. H.)

Eczema of the Legs.

All forms of the disease may occur in this locality and should receive the treatment as suggested under the general head of this subject; the following details, however, are deserving of special attention:

Green Soap:—Applied with friction, this remedy gives satisfactory results in eczema rubrum; after rubbing on briskly wash off the soap with warm water, dry gently and apply **Ung. Vaselini Plumbicum** on strips of muslin placed on evenly and carefully retained by a rubber bandage. (B. H.)

Diachylon Ointment is excellent in moist forms. (Vn.)

The following paste recommended by Unna is said by Van Harlingen to give satisfactory results:

Kaolin,	
Ol. Lini,	āā ʒvi.
Zinc. Oxidi,	
Liq. Plumbi Subacetat.,	āā ʒss.

To be painted on and allowed to dry; then bandage, changing every twenty-four hours. (Vn.)

Ichthyol:—2 per cent. solution in **Glycerine**, **Al-**

mond Oil, or Rose Water applied on lint and covered with layers of cotton, followed by a 2 per cent. Zinc or Diachylon Ointment. (Vn.)

Glycerole of Lead Subacetate:—Dilutions of various strengths are employed. It is indicated in extensive chronic eczema rubrum of a dusky hue accompanied by weeping, varicose veins and œdema of the subcutaneous tissues. It is also used for palmar eczema. (N.) Solutions of 15–30 grains to 1 ounce are recommended; saturated strips of muslin are carefully applied, covered with waxed paper and bandaged.

Rubber Bandages:—When the veins are varicose apply a rubber bandage directly to the skin, remove at night, cleanse and disinfect, then dust the leg with Starch or Boric Acid. The bandage should be used with caution lest it cut the surface or macerate the tissue. (Vn.)

Salicylated Soap Plasters:—Most useful in scaly conditions; serviceable in eczema rubrum. (B. H.)

The following is recommended for general use in chronic forms: Ung. zinci oxidi, ung. hydrarg., ung. plumbi subacetat., equal parts. (T. 96.)

Massage is often of service in very chronic conditions. Before employing, wash the limb with some parasiticide soap and follow with a lotion of Bichloride of Mercury, 1–1000, or a saturated solution of Boric Acid. (Vn.)

Eczema of the Lips.

Cold Cream, Lanoline, Zinc Almond Emulsion, Ung. Vaselinei Plumbicum for acute types. Thymol, 5 grains, with Cold Cream, 1 ounce, Salicylic Acid Plaster, 5 per cent., in chronic forms. Tr. Benzoin

Comp. or Collodion painted on serve well, give relief and protection. (B. H.)

Dilute Phosphoric Acid:—May be employed as follows:

Acid. Phosphoric. Dil.,	
Glycerini,	
Syrupi,	āā ʒss.
Apply three times a day.	(Vn.)

Nitrate of Silver:—The crayon may be touched to deep cracks. Afterwards apply **Benzoin**.

Hydrarg. Oxid. Rubr.:—A minute quantity of a strong ointment, 40–60 grains to the drachm, for very chronic fissures in the lips; the fissure is torn open and the ointment applied with a little stick. (Vn.)

Nasal Catarrh, which is a frequent cause, should receive treatment.

Eczema of the Nails.

Salicylated Collodion:—Painted on the infiltration around the nail, followed by **Ung. Vaselini Plumbicum**. (B. H.)

Tar Ointment:—ʒi-ʒi gives best results. (Vn.)

Ung. Diachylon:—Useful when there is much tenderness. (Vn.)

Salicylic Acid:—The salicylated rubber plaster during the day, and an ointment of the acid with tar ointment, ʒi-ʒi, when the parts are tender. (Vn.)

Eczema of the Nares.

This affection is often associated with chronic rhinitis; when such is the case the first effort should be directed to the treatment of the latter condition. All crusts should be removed by soaking in **Olive Oil**,

which can be dropped into the nose or applied with a camel's hair brush; when thoroughly softened they can be easily removed, after which one of the following may be used with good effect: Ung. Hydrarg. Oxidi Flav.; Ung. Plumbi and Vaseline, equal parts; Glycerole of Lead Subacetate and Ung. Aq. Rosæ, equal parts. (Hd.)

Zinc and Red Precipitate Mull:—Small rolls of paper covered with the mull and inserted up the nostril are recommended by Unna.

Eczema of the Scalp.

In children and men the hair should be cut short, but this is not necessary in women. If crusts are present they may be removed by **Olive Oil**; saturate the scalp, cover the head with a cap and wash off in the morning; repeat if necessary, or use **Starch Compresses** to scalp, allowing them to remain on for a little while, or **Starch and Boric Acid**, each 1 drachm, water, 1 pint. (Vn.)

Sodium Bicarbonate:—Very useful in solution applied in the same manner for removing crusts in infantile variety. The following is recommended:

Sod. Bicarb.,	ʒi.	
Liq. Sod. Chlorinat.,	ʒi.	
Aq. Destill.,	ʒxii.	(Al.)

Liq. Potass.:—1 part to 8–12 of olive oil for removal of crusts in children. (Jac.)

The above applications prepare the scalp for more active medicinal agents.

Lotio Nigra:—Alone or better with **Aq. Calcis** for acute inflammatory conditions. Apply with sponge for ten or fifteen minutes and follow with an ointment. (Vn.)

Ung. Vaselinei Plumbicum:—Spread on strips of muslin and retained by a cap, useful when the hair is short; and in acute forms in young infants. (B. H.)

Carbolic Acid:—Solutions are useful. Same indications as for black wash. (Vn.)

The following ointments are recommended by Van Harlingen:

Bismuth. Subnitrat.,
Ung. Petrolii, equal parts.

Or,

Hydrarg. Ammoniat.,	grs. x-xx.
Ung. Petrolii,	℥i.

The latter is more stimulating, and indicated in subacute and chronic forms as a substitute for tar preparations.

Jacobi recommends after the removal of crusts:

Bismuth Subnitrate, 5 parts; **Vaseline**, **Zinc Oxide Ointment**, each 20 parts,

Or **Hebra's Diachylon Ointment** spread on linen and worn for days or weeks.

Salicylic Acid or Sulphur:—20-30 grains of either to the ounce often has striking effects after subsidence of acute symptoms, or when the condition from the onset has been more of a moist exudation. (B. H.)

Salicylic Sulphur Ointment:—Nothing, says Hardaway, is so useful in the dry, scaly, chronic forms of the disease; the following combination being recommended:

Acid. Salicylici,	℥i.
Sulphur Præcipit.,	℥i.
Vaselinei,	℥i.
Ol. Limonis,	q. s.

Rub in scalp thoroughly once or twice daily.

The following is recommended as the best applica-

tion after the more acute symptoms have disappeared:

Ung. Picis Liq.,	℥i-ii.
Zinc. Oxidi,	℥i.
Ung. Aq. Rosæ,	℥i.

Spread on muslin if there is no hair; otherwise smear on gently with the fingers. (B. H.)

Nitrate of Silver:—1–2 per cent. solutions applied daily, or at longer intervals, followed by salves. (Duh.)

Resorcin:—5 per cent. as a salve or lotion with glycerine or alcohol is of benefit. (B. H.)

Balsam Peru:—Useful in children when the healing process is slow. (Jac.)

Tar:—Used when still stronger stimulation is necessary, viz:

Ol. Cadini,	℥ss.	
Ol. Olivæ,	℥i.	(B. H.)

For adults when there is intense pruritis.

Or,

Picis Liquid.,	℥i.	
Vaselini,	℥i.	(Vn.)

Tar and Mercury together often act beneficially, viz.:

Hydrarg. Ammoniat.,	℥i.	
Liq. Carbonis Deterg.,	℥ss.	
Lanolini,	℥i.	(B. H.)

Tannic Acid:—When there is a tendency to greasiness.

The following ointment is useful:

Acid. Tannici,	℥ss-i.	
Acid. Carbolici,	M v x.	
Cerat. Galeni,	℥i.	(B. H.)

Calomel and White Precipitate:—These remedies may be substituted for tar with the same indications, when the latter is not well tolerated. They may be used alone in the strength of from 20–60 grains to the ounce. Calomel ointment has a stimulating and drying effect and is useful when there is discharge.

Glycerine and Alcohol:—May be substituted in the various preparations for vaseline when the hair is long. All ointments should be soft.

Universal Eczema.

The patient should be kept in bed. The most effective applications are lotions and oils, viz: **Carron Oil**, **Cotton Seed Oil**, and **Carbolic Acid**, 1 part of the acid to 60 of the oil, or anoint the body with **Vaseline** and apply **Starch Powder**, or **Salicylic Acid** in **Olive Oil**, 1 part to 30. (Ja.)

Bulkley recommends after drying the skin :

Carbolic Acid,	ʒi-ʒi.
Glycerite of Starch,	ʒiv.

MacIntosh's cream is an excellent preparation. Its composition is as follows :

Bismuth. Subnitrat.,	ʒii.
Zinc. Oxidi,	ʒss.
Glycerini,	ʒiss.
Acid. Carbolic,	M xx-xxx.
Vaselini,	ʒvi.

Apply with a brush. The carbolic acid may be omitted or reduced for universal application. (B. H.)

Alkaline Baths, followed by one of the oily applications, after gently drying the skin, are effective. The bath, temperature of which should be 98°, should continue for ten or fifteen minutes. The best way to dry the body is to wrap the patient in

a warm sheet and pat the skin dry. After replacing the patient in bed cover him with dusting powders and wrap him in a sheet. (Kp.)

When the skin is thick and scaly, **Wilkinson's Ointment** 10 per cent., pigments of **Salicylic Acid** or **Chrysarobin** in **Traumaticine**, **Sulphate of Zinc** ʒii-iv -Oj, and the following solution of **Lead** and **Tar**:

Liq. Carbon. Deterg.,	ʒii.
Liq. Plumbi Subacetat.,	ʒii.
Aq. Destill.,	ʒviii. (B. H.)

Solutions of **Menthol** and **Carbolic** will prove useful for the relief of the **Pruritus**. (See that subject.)

ECZEMA SEBORRHŒICUM.

The principal treatment is local and most cases, even those of long standing, will be found amenable to mild measures.

Sulphur:—One of the best remedies for the moist variety. (Ja.)

Among its combinations the following will prove useful:

Sulphur. præcipitat.,	ʒss-i.
Zinc. Oxidi,	grs. xv l.
Lanolini,	
Ol. Amygdalæ,	āā ʒiii.
Ext. Violet,	q. s. M. (Brocq.)

Resorcin:—One of the most effective remedies in solution and ointments. (F.) For the hairy parts a solution in alcohol and water is as follows:

Resorcin.,	ʒss-i.
Spts. Vini Rect.,	
Aq. Destill.,	āā ʒiss.

Or,

Resorcin.,	℥iv-℥iii.
Ol. Ricini Pur.,	℥iss.

On non-hairy parts 10-30 grains to 1 ounce of ointment base, applied daily, acts well. (B. H.)

For irritable forms in the folds of the skin, and for the moist variety, the following may be used with good effect:

Resorcin.,	grs. xii.
Zinc. Oxidi,	℥ss ℥i.
Cerat. Simp.,	℥v. (Vn.)

For the disease in children the following is especially recommended: After removal of crusts apply compresses soaked in resorcin, 6-1000. At night apply an ointment of 1 part of **Balsam of Peru** and 1-30 of vaseline. (T. 96.)

Sulphur and Resorcin may be combined with advantage. A 3-6 or 10 per cent. salve of the former with 1-3 per cent. of resorcin may be employed.

The following constitutes a useful formula:

Resorcin.,	grs. v-xv.
Sulphur Præcipit.,	grs. xv ℥ss.
Ung. Aquæ Rosæ,	℥i. (B. H.)

Boracic Acid, or **Salicylic Acid**, may sometimes be substituted for resorcin, the former in 3-5 per cent. strength and the latter in 1-2 per cent.

The following is often used:

Hydrarg. Chlorid. Mitis,	grs. viii-xv.
Zinc. Oxidi,	℥ss-i.
Petrolati	℥v. (Vn.)

Chrysarobin, **Anthrarobin** and **Pyrogallic Acid** in the strength of 2-10 per cent. ointments or lotions may be used in those cases marked by scaliness and

incrustation (Ja.), and in those resembling psoriasis. (B. H.)

Ol. Cadini and Ichthyol ointments are beneficial.

Ichthyol Soap should be used for general cleansing, and **Sublimate Soap** for the scalp.

EMPHYSEMA.

Systematic long-continued practice in **Expiratory Exercises** are recommended. (T. 97.)

Condensed Air Baths:—Often afford marked relief, but are contra-indicated when there are cardiac lesions and the age of the patient is over 50. (F.)

Ozone Inhalations:—Have been used, it is said, with apparently good effect. (F.)

Oxygen Inhalations:—Sometimes prove useful. (Gn.)

Treatment of Waldenburg:—This consists of inspiring compressed air and expiring into rarified air. It is recommended as deserving further trial. (An.)

Forcible Compression of the Chest:—This must usually be exercised by an attendant. An apparatus is described by Strümpell for this purpose. It consists of two boards fastened behind and allowed to project in front, so that the patient, taking hold of the projecting ends, can compress his own chest with each expiration. Compression should be coincident with each expiratory movement. (Ty.)

EMPYEMA.

Local treatment is surgical. Pus must be removed by aspiration or incision.

Aspiration:—Adequate for the majority of cases. (L. T.) It may be employed when septic symptoms are not urgent. (W.) Anæsthesia is condemned as dangerous (Sj.), but local anæsthesia in the form of rhigoline or injections of cocaine may be advantageously employed. It is advisable to make an exploratory puncture before operating.

Incision and Free Drainage:—The incision should be from two to three inches long, and a large sized drainage tube inserted with the end secured with a safety pin. It should be made in the eighth intercostal space a little back of the axillary line; the skin and muscles are gradually divided down to the pleura, which is then incised. Strict antisepsis should be observed in all details, and the patient should be anæsthetized. (Ger.)

Exsection of the Rib:—Recommended for free drainage, removing about one to two inches of the rib. It is superior to simple incision on account of the free exit which it affords, allowing the large masses of fibrinous pus to escape. (L. T.) It has also been recommended for children, on account of the smallness of the space between the ribs, which produces compression of the drainage tube. (T. 96.)

Irrigation:—Formerly thought to be of primary importance and absolutely essential. Many recent writers, however, are beginning to regard it in a somewhat different light. All agree that it is imperative when the pus is offensive. (L. T.)

Salicylic Acid 3 per cent. or **Boric Acid** saturated solution in sterilized water, recommended for irrigation of the cavity after removal of pus. (L. T.)

Hydrogen Peroxide:—Diluted one-half, especially recommended for washing out the cavity. (Gn.)

Pyoktanin Blue:—In solution 1–1000 to 2000, is well adapted for irrigation, being non-poisonous. (Al.)

Hydrarg. Bichlorid.:—1–5000 for irrigation, followed by a final flushing of the cavity of 1–1000; great care should be observed to drain off all residue of this solution by turning the patient on the side. (Ger.)

This agent is recommended by many surgeons.

Tr. Iodine:—The undiluted tincture, Bartholow says, is thrown into the cavity without risk and with great benefit.

The **Liq. Iodi Comp.** in the proportion of 1 part to 15 of distilled water may be used for washing out the same. (B.)

Styrone:—For washing cavity after exsection of the rib, solutions of 1–200 may be used, gradually increasing to 1–40. (Al.)

Iodoform Gauze Packing:—The careful introduction, into the incision, of a roll of iodoform gauze is preferred by Anders to irrigation, except when the pus is offensive. A pad of oakum covered with the gauze forms an excellent dressing for old cases. (L. T.)

Syphon of Revilloid:—This method is recommended for intractable cases which are incurable by the so-called classical methods. Favorable results have been reported in cases of this unpromising nature. It is described as follows: The syphon consists of a tube of black rubber which is inserted into the pleural cavity; two feet from the proximal end is placed a bulb; the tube is continued for three or four feet, and its end is placed in a receptacle containing an antiseptic solution—either carbolic acid or creolin—so as to

prevent the entrance of air. The proximal end is retained in position with plaster. If there is no fistula, an incision is made near the posterior axillary line. After making the incision, which should be large enough to allow the free escape of pus and membrane, the syphon is introduced, and the lips of the incision hermetically sealed around the tube. All that is necessary now is careful watchfulness on the part of the surgeon. (B. M. S. J., 11, 22, 94.)

Estlanders Operation:—May be considered in old and inveterate cases with or without sinuses. (Ger.)

James' Method for Expansion of the Lungs:—This has been practiced with success. The patient for a certain time transfers water by air pressure from one bottle to another. The bottles should hold about a gallon each, and by an arrangement of tubes the patient forces the water from one bottle to another. The strength or quantity of the transfer is increased as the patient's strength progresses. Thus the expansion of the lung is systematically practiced. (An.)

ENCEPHALITIS, MENINGITIS, AND CEREBRAL CONGESTION.

Ice Bags and Cold Compresses should be applied to the head, and the patient kept in bed with as little physical restraint as possible. (Gn.)

In cerebral congestion with much mental excitement, great and speedy relief may frequently be obtained by packing the legs from the groin to the feet inclusive in large towels which have been wrung out in hot mustard water. The towels should be covered with blankets, and after the pack the limbs should be quickly rubbed with tepid damp towels. (Rd.)

ENDOCARDITIS.

ACUTE ENDOCARDITIS:

An Ice Bag to the chest over the region of the heart affords marked amelioration of symptoms in endocarditis from acute infectious diseases, the pain and palpitation are relieved and the temperature lowered. A layer of flannel should be placed between the bag and the skin, otherwise erythema may appear. (T. 98.)

Hot Fomentations, as mustard or linseed poultices, for relief of pain are preferred in some cases. (Bt.)

Blisters are used by some in acute rheumatic types. (T. 97.)

CHRONIC ENDOCARDITIS:

(See Valvular Disease of the Heart.)

ENDOCERVICITIS, AND CERVICITIS.

ACUTE ENDOCERVICITIS AND CERVICITIS:

From a clinical standpoint these conditions do not need to be considered separately from Acute Endometritis and Metritis. (K. C.)

CHRONIC ENDOCERVICITIS, AND CERVICITIS AND EROSION.

Remove the plug of mucus from the cervix with

cotton on an applicator, and thoroughly cleanse before using local remedial agents.

Tepid Water Douches:—For cleanliness unless the hot water douche is used.

Hot Water Douche:—Large quantities of very hot water are generally employed, with good effect, but at the same time frequently abused. (Sw.)

Iodine:—One of the most efficacious remedies, indicated in granular degenerations and in all chronic conditions; contra-indicated in acute inflammations. Apply with a brush, inserting it well up in the canal. Churchill's iodine should be used. (Sw.)

The following is recommended when there is uterine colic:

Tr. Iodine and Creosote each	ʒi.
Glycerine,	ʒi.

To be applied on tampons. (Ch.)

Glycerine:—The chief agent is local applications for relief of congestion; used largely as a vehicle for other remedies, as well as for its local depleting effects.

Ichthyol:—Regarded by many as one of the most efficient remedies; is of great benefit and wide range of application. It is used in various strengths from 5-50 per cent. in glycerine, sometimes pure. (F.)

Iodotannin:—Packed around cervix is of undoubted value (B.); alterative and astringent.

Carbolic Acid:—As a disinfectant, in 2-5 per cent. solutions for douches; also as a mild caustic and a stimulant for erosions. (Sw.)

Boroglyceride:—One of the most valuable applications in erosions with effusive leucorrhœa and itching of the parts. Used diluted with twice its bulk in glycerine or in the form of a cerate.

Calendula:—When erosions are very red and bleed easily, this remedy may be used with good effect in varying strengths; 2 drachms to 8 ounces of tepid water will form a useful douche. Non-alcoholic preparations are preferable. (M. H.)

Hydrastis:—Useful in powder, tincture or cerate in cases attended with profuse stringy leucorrhœa. Equal parts of the extract and boroglycerine very useful. (Bt.)

Hamamelis:—May be used when soothing effects are indicated; as in erosions that are sore and bleeding; or in venous engorgement and piles; the cerate or watery extract with equal parts of glycerine, as an application or injection. Iodoform added is a useful adjuvant. (Bt.)

Iodoform:—A very effective remedy. Its odor may be somewhat counteracted by chloral hydrate, the tampon being soaked in the following:

Iodoform,	3i.
Chloral Hydrate,	grs. xx.
Glycerine,	3i. (Sw.)

Sanguinaria:—Equal parts with myrrh and hydrastis mixed so as to form a fine powder, applied in the usual way with wool tampons, form a most excellent and effective remedy. (Sw.)

Tannin:—For astringent effect when relaxation of the parts is prominent, applied on glycerine tampons. (M. H.)

Chromic Acid:—A 50 per cent. aqueous solution in obstinate cases with glairy mucus discharge, especially when a laceration exists. Application should be made only once a week and only in exceptional cases. (Sw.)

Zinc Oleate:—1 part with iodoform 2 parts. (F.)

As an astringent when parts are excoriated and there is a fetid leucorrhœa.

Thymol:—1 part to 1000 or 3000 on glycerine tampons. (F.)

Zinc Sozoiodate:—The powder gives satisfactory results. (Al.)

Aristol:—When the consent of the patient cannot be obtained for the repair of a lacerated cervix, a pencil of five grains of aristol made up with gum arabic may be introduced daily and retained by a tampon. It should remain in for twenty-four hours; then the cervical canal should be syringed out with the following solution, using two tablespoonfuls to a quart of water:

Salicylic Acid,	4 parts.
Spts. Lavender,	30 parts.
Water,	450 parts. (T. 98.)

The aforementioned remedies are nearly all to be applied on glycerine tampons. (For the use of injections, see Leucorrhœa.)

Curettage:—When other means have failed, and the cervix remains thickened and enlarged, the entire surface from the internal to the external os should be scraped with the curette. (K. C.) (For details of procedure see works on Gynæcology.)

Shröder's Operation:—This is indicated when the disease has penetrated deeply, where superficial applications will always fail. Deep acting caustics may have curative effect but they produce cicatricial contraction. Thorough excision and covering the exposed surface by a plastic operation, as recommended by Shröder, will give the best results. (Dud.)

Steam Evaporization for the treatment of endocervicitis has recently been employed. (See Endometritis.)

ENDOMETRITIS AND METRITIS.

ACUTE ENDOMETRITIS AND METRITIS:

Mild Forms.

Rest in bed and Hot Vaginal Douches, temp. 115° .; four quarts of water should be used every three or four hours. (K. C.)

Hot Fomentations over hypogastrium will generally control pain and render opiates unnecessary. (Cp.)

Scarification of the Cervix:—May be employed with good effect to induce rapid depletion; after an interval of four or five hours, use hot douches followed by glycerine tampons. (K. C.)

More Severe Forms.

Gonorrhœal:—Dilate the cervix under anæsthesia so as to admit a small sized uterine speculum, then copiously irrigate with **Bichloride of Mercury**, 1–3000; use a quart, then pack the cavity with sterilized gauze, one end of which should be allowed to remain in the vagina to permit of easy removal. The vaginitis, which is present, should receive treatment. At the end of twenty-four hours this procedure should be repeated. The os will remain open sufficiently to dispense with dilatation again. **Creolin** will facilitate the introduction of the gauze. (K. C.)

Ice to the Abdomen and the Wet Pack. (T. 96.)

Cauterization:—May be tried if appendages are in good condition, in order to destroy the gonococci, using **Phenol Alcohol**, 50 per cent. **Chloride of Zinc**,

20 per cent., Tr. Iodine, 20 per cent., or Nitrate of Silver, 10 per cent. (T. 96.)

Septic Inflammation Following Operations:—When in the non-pregnant uterus prompt measures are necessary; the cut surfaces of the cervix should be exposed and freely cauterized with pure **Carbolic Acid**, and the uterine cavity irrigated with a **Bichloride of Mercury Solution** 1–3000, and then packed with **Sterilized Gauze**. Curetting is rarely required in this condition. The wounded surfaces should be kept apart by sterilized gauze which should be retained by packing the vagina with the same. If the symptoms improve, remove the vaginal packing at the end of two days, leaving that of the uterus in place for four or five days. It should then be withdrawn and the cavity not entered again. Vaginal douches should be employed after the removal of the vaginal packing and continued until the removal of the uterine packing; then apply glycerine tampons. The cut surfaces should then receive attention, being treated by cauterants, astringents, or a new operation performed as deemed best. If unfavorable symptoms continue, employ the treatment mentioned for the graver forms. (K. C.)

Grave Forms of Inflammation—Puerperal.

Curettage:—The cavity of the uterus should receive prompt and energetic treatment without delay.

Cleanse the vulva, vagina, cervix and cervical canal with a copious supply of water and green soap, using the finger and a wad of cotton in a pair of long handled forceps. Dilate the internal os if necessary; then irrigate the cavity of the uterus freely with bichloride of mercury, 1–2000. After the irrigation curettage should be done, examining with the fingers

from time to time to make sure that all detritus has been removed. The sharp curette, double curette forceps, or placental forceps are recommended. After curetting, irrigate with the same solution at a temperature of 115° – 120° . Even if there is excessive hæmorrhage, little time should be given during curetting to checking the bleeding, which is most always copious, as the hot irrigation so soon to be applied will arrest it. After this procedure pack the uterine cavity with folds of sterilized gauze through the uterine speculum. At the end of twenty-four hours remove the packing, and if there is no fever the cavity of the uterus may be left, but if the temperature is still elevated remove the packing, irrigate and apply fresh. This should be repeated at intervals as indicated. This treatment by curettage and drainage should be persistently pursued in even the most desperate cases. (K. C.)

Alcohol Gauze:—Gauze soaked in alcohol and used for packing is recommended by Grandin, who says iodoform gauze is liable occasionally to produce poisoning. (E. J.)

Hydrogen Peroxide:—Commended for flushing out cavity of uterus after curettage. (Al.)

Lysol, Potass. Permang., and Carbolic Acid, in vaginal douches may be repeated every two or three hours; if there is no improvement wash out uterus with mild antiseptic solutions, repeating every twelve or twenty-four hours. (T. 96.)

Camphorated Alcohol:—Recommended for cauterizing after curettage for removal of placental fragments. (T. 96.)

Continuous Irrigation:—Advocated when the temperature remains unaffected. Weak Carbolic, Boric

Acid, or **Lysol** solutions are used. Irrigation is maintained continuously for twelve hours or more. Following this the inner surface of the uterus is painted with **Tincture of Iodine** undiluted. (T. 98.)

CHRONIC ENDOMETRITIS AND METRITIS:

Displacements and lacerations should receive immediate attention.

Acute and subacute metritis, inflammation of the appendages, para- and perimetritis, are contra-indications to local interference in the endometrium. Cervical or vaginal catarrh if present should also receive attention.

The plug of mucus in the cervical canal must first be extracted before anything can be accomplished; this is sometimes difficult with ordinary forceps or application with cotton. In that case a small syringe with a short rubber tubing attached to the nozzle may be used. The tubing is inserted into the external os, and the mucus removed by suction. A narrow piece of sponge on forceps may also be employed for this purpose. If the os is contracted it must be dilated or incised in order to admit of free exit for the pent up secretions. (Sw.)

The remedies mentioned for chronic endocervicitis for application to the external os and cervical canal are also indicated in this condition. The reader is, therefore, referred to that subject.

Local Depletion will temporarily relieve, allowing about half an ounce of blood to escape by puncture or scarification. (Sw.)

Hot Water Douches and Hot Sitz Baths:—The systematic use of the hot douche combined with the hot sitz bath is very important. (Sw.)

Glycerine Tampons:—Frequently applied tend to depletion, and should follow daily the hot water douches. (K.C.)

Electricity:—Great benefit is sometimes afforded by a mild galvanic current applied every second or third day, negative pole in the uterus, positive over the hypogastrium. The current should be from 8-12 milliampères. (Sw.) In the stage of infiltration the positive pole of galvanic current and zinc electrolysis with faradization; in the stage of induration, dilatation, curettage and gauze packing prove more satisfactory according to Goelet. (Sj.)

Intra-Uterine Applications:—In addition to the aforementioned remedial agents, applications directly to the surface of the endometrium are employed. There seems to be some divergence of opinion as to the utility of these measures, especially in regard to cauterants, which are condemned by some as more harmful than productive of good. On the other hand, the most recent writers advocate their employment. The remedies which meet with the most general approbation in intra-uterine treatment are **Iodized Phenol**, **Carbolic Acid** pure, and **Iodine**; the best results being obtained after curettage. Before adopting this method the os should be dilated with laminaria tents, and no irrigation of the uterine cavity should be attempted unless the os is patulous. The external parts should be scrubbed with soap and water, antiseptic vaginal douches administered, the vagina wiped dry and swabbed with a 5 per cent. solution of **Carbolic Acid**, then with a 1 per cent. solution of **Creolin**; slight traction is made on the cervix with the blunt hook or tenaculum. After the appli-

cation has been made, a tampon of **Ichthyol Ammoniate** 1–10 in glycerine is advised, and over this a dry cotton tampon. (Dud.)

Carbolic Acid:—The undiluted acid is generally regarded as the safest and most efficient remedy, since it does not burn deep enough to destroy the submucous tissue. (Sj.) According to Bartholow it is the best agent for the treatment of uterine catarrh.

Ichthyol:—Applied pure to the fundus gives relief to pain and dragging sensation and lessens leucorrhœa. (F.)

Tr. Iodi Comp. (Churchill's):—This remedy is much used and is very generally advised. (Sw.)

Iron Sesquichloride:—In mild forms with metrorrhagia, also in bleeding from myomata, and parenchymatous hæmorrhages, injections into the uterine cavity without dilatation have been recommended. (T. 96.)

Zinc Chloride:—10 per cent. solutions are used. Mundé has employed 50 per cent. solutions with good results in the worst cases. The solution is to be thoroughly applied and followed by the insertion of a sterilized drain through the internal os. Treatment by this agent has been abandoned by many because of the tendency to cicatrization of the surface. (Sj.)

Iodized Phenol:—Recommended also by Mundé for use in milder cases, and for cauterization after the use of the strong zinc chloride, when a second cauterant application is deemed advisable. A sterilized drainage tube is to be inserted through the internal os as above.

Nitric Acid:—When the disease fails to respond to

ordinary treatment, and the mucous follicles are the seat of cystic degeneration, or where the granulations have become very exuberant, this agent is useful. The cavity of the uterus may be touched with a cotton wrapped applicator dipped in the acid; the parts should be thoroughly cleansed first and the cervix well protected from the acid. It is well to place in the vagina beneath the cervix a pledget of cotton soaked in a solution of bicarbonate of soda to protect the vaginal mucous membrane. After the acid has been used, remove the cotton and syringe with water, after which a glycerine tampon is applied and renewed daily. Nitric acid is condemned by some writers, together with other powerful caustics, as decidedly injurious. It is, however, recommended in those cases of the hæmorrhagic types which develop in connection with the menopause and membranous exudation. A vulcanite intra-uterine speculum is recommended to prevent the acid from getting on the cervical canal. (Alb.)

Actual Cautery:—This agent may be employed in inveterate cases of the variety mentioned as indicating the use of nitric acid. (K. C.)

Chromic Acid:—Solution of 15 grains to 1 drachm. (B.)

Curettage:—For intractable forms, strongly indicated when there is inflammation of appendages or uterus; anæsthesia and thorough antiseptics are essential. After thoroughly cleansing and douching with antiseptic solutions, dilate the cervix, insert a uterine cylindrical speculum, then flush the cavity of the uterus with a warm solution of bichloride of mercury, 1–2000, to the amount of one or two pints.

After this apply the curette, using a sharp instrument aided by the double curette or forceps of Emmet. After this introduce again the uterine speculum and irrigate copiously with the bichloride solution same as before. The uterus is then packed with a strip of gauze which has been previously placed in a bichloride of mercury solution 1-500. This gauze should be a strip about four feet in length and folded four times. Catch an end upon a Sims tampon screw, and pass it into the uterus through the speculum, length by length, packing it in carefully, first at one cornu then at the other, then at the fundus, gradually withdrawing the speculum. The vagina is then packed with gauze. At the end of forty-eight hours the vaginal packing is removed; the vagina is then drenched twice daily until the uterine packing is removed, which is done on the sixth day. The vigor with which the curettage is performed will depend upon the conditions present; hæmorrhagic forms call for a more energetic application than recent subinvolution, or the endometritis of simple stenosis. The anterior and posterior walls, the fundus and the sulci and the recesses of each cornu are all to be scraped in turn. (K. C.)

The following line of treatment has been suggested for endometritis in aged women attended with purulent vaginal discharge: Swab out the vagina with strong **Carbolic Acid**, or prescribe frequent astringent injections such as **Zinc Chloride** 5-10 grains to the pint. Repeat the carbolic acid applications two or three times, taking care that none goes on the vulva. If this is not successful, **Dilate the Cervix** with laminaria tents and explore the interior; if growths are discovered examine specimens of the

structure microscopically; if there are no growths scrape with **Blunt Curette** and swab the cavity with **Carbolic Acid** or **Lin. Iodi**. This is said to always remove the symptoms for a time. (T. 98.)

The following are recommended for glandular forms:

Sodium Solutions:—To remove mucous secretions, employ sodium solutions injected daily by means of a simple catheter, followed by **Carbolic Acid** 2½ per cent. solution, and finally by **Lysol Solution** 1 per cent. (T. 96.) Another plan of treatment for slight glandular endometritis consists of the injection of ¼–½ quart of **Sodium Solution**, 3 per cent., followed by **Carbolic Acid**, 2 per cent., **Lysol**, ½ per cent., **Nitrate of Silver**, 2 per cent., or **Zinc Chloride** or **Cupric Sulphate** or **Cupric Aluminate**, 5 per cent. These injections are made into the uterus through an ordinary catheter, the instrument being moved from side to side to allow the fluid to flow out.

The instrument having been removed, a tampon of iodoform gauze is placed below the uterus, and the patient allowed to rest an hour to avert uterine colic. (T. 96.)

Traumatol:—Pencils are recommended as having produced successful results. (F.)

Vaporization:—Introduction of steam into the uterine cavity has been used in hyperplastic endometritis with severe hæmorrhage. (F.) With regard to the technique of the procedure, the use of a wooden tube for the protection of the cervix is advised. This is considered preferable to gauze, which becomes too readily saturated with hot vapor. The wooden tubes should be kept in a disinfectant solution. If there is a tendency of the metal tubing for conducting

the steam to become stopped with clots, it will be necessary to carefully empty the uterus of blood; the vapor heated to 110° C. will arrest the hæmorrhage in a short time. It is desirable to use vapor for the shortest possible time; one-quarter minute is sufficient for most cases, and one-half minute should be considered the maximum. The temperature should range between 102° and 110° C. The higher the temperature the shorter the time of application. A case of abortion with considerable hæmorrhage is mentioned in which vaporization rapidly arrested the bleeding. (C. G., 8, 24, 98.)

The following general line of treatment is recommended in place of more conventional methods: Vaginal douches, astringent injections, vaginal and intra-uterine applications of dry powders, intra-uterine pencils, intra-uterine gauze tamponing. (Dud.)

Euphorbin:—Intra-uterine pencils are used. (F.)

The following solutions are recommended by Pozzi for injections:

Hydrarg. Bichlorid., 1-3000.

Alum, ʒss-Oi.

Tannic Acid, ʒss-Oi.

Boric Acid, ʒi-Oi.

ENURESIS.

The bladder should be emptied before retiring, and the patient sleep on a hard mattress with light clothing, and avoid lying on the back; this may be prevented by fastening an empty cotton spool to a belt which will be so arranged as to cause pressure on the lumbar region as soon as the supine position is as-

sumed. About two hours after sleep the patient should be awakened, as it is at this time usually the discharge of urine occurs.

At bedtime, a **Warm Bath** at 90° to 98° F., or a **Warm Sitz Bath** or **Cold Sponging** of the lumbar region is often of value. Open air **Exercise** and **Cold Baths** every morning should be enjoined.

Children troubled with urinary incontinence should be taught to retain their water during the day as long as possible. (Rd.)

General Massage, sponging with alcohol and water 1-6, **Friction** with coarse towels, and **Sea Bathing** are beneficial.

Nux Vomica:—An ointment of 1 part of the extract with 16 of lard. A portion the size of a coffee bean inserted into the rectum at night often acts well. (Jac.)

Electricity:—The interrupted current, one electrode to the perineum, the other to the epigastrium or lumbar region. (Erb.)

Collodion:—Applied over the meatus sealing it, has been used, though it is scarcely to be recommended.

Strychnine:—Occasionally subcutaneous injections into the perineum of $\frac{1}{40}$ — $\frac{1}{60}$ grains have been effective in intractable and desperate cases. (Jac.)

EPIDIDIMITIS.

Rest and Suspension of Scrotum is the first essential. When the onset of the disease is announced by pain in the perineum, dragging sensation in the inguinal region and frequent urination, a **Hot Bath** should be administered and the patient put to bed with the testicles properly supported. (Cl.)

Aspiration or Puncture of the Tunica Vaginalis:—This is indicated when the pain is intense; in severe forms of inflammation it affords immediate relief. The sac will fill up again, requiring a repetition of the operation, to which the patient will readily assent, so great is the comfort afforded by this measure. Antiseptic precautions are enjoined. After the puncture, and also when it has not been performed, the scrotum should be wrapped in cotton, covered with oiled silk, and placed in a shallow suspensory bandage with lacers, so that equal pressure may be maintained. (Cl.)

Tobacco and Flaxseed Poultice:—Applied every three hours, completely enveloping the scrotum, and covered with oiled silk and flannel, is useful. (Cl.)

Hamamelis:—The tincture applied hot in the same manner as the poultice affords great relief. (Cl.)

Ice:—The usual ice bag or bladder will act satisfactorily for the relief of pain and inflammation.

Ethyl Chloride also relieves and reduces inflammation. (F.)

Mercurial Ointment:—Alone or mixed with equal parts of **Extract of Belladonna** made into a paste, after the acute and painful symptoms have subsided for the reduction of swelling. (Cl.)

Ammon. Chloride:— $\frac{3}{4}$ ss—Oj, for reduction of swelling in the latter stages. (Al.)

Nitrate of Silver:—10 grs to the oz. in the form of an ointment is sometimes used. (Cl.)

Strapping:—When the pain has ceased this is indicated for the reduction of swelling; pain sometimes follows its application, but it usually disappears in an hour or two; if it continues the straps should be removed, for in this case they are too tight. The fol-

lowing is the method of application: First remove the hair from the scrotum and render the parts aseptic, then cut strips of adhesive plaster an inch wide and 6–8 inches long. The spermatic cord about the swelling is encircled with the left hand, and the tumor pressed well down into the scrotum, rendering the walls tense and firm. A piece of muslin bandage is now carried twice around the part involved at the upper border, and fastened at the end by a piece of adhesive plaster. The muslin prevents the adhesive straps from cutting. The straps are now applied, encircling the upper part of the scrotum, overlapping one another from above downward, until a little below the centre, when the direction is changed and carried under the scrotum, bringing the pendulous parts upward. A single strap to hold the ends will complete the dressing. After which a suspensory bandage should be put on and the patient permitted to go about. (Cl.)

EPILEPSY.

(See Convulsions.)

EPISTAXIS.

Ice should be applied to the forehead and back of the neck, and a small piece inserted up the nostril; raise the arms above the head and hold them there for a short time; press horizontally on the cheek bones with the fingers just above the nostrils, and so compress the blood supply. Immerse feet and legs in hot water. (Bt.) The patient should sit up-

right, and grasp the nostrils tightly between the thumb and index finger, so as to prevent the passage of air. Compress the facial artery and resort at once to tampons if hæmorrhage becomes dangerous. (Whar.)

Tannic Acid or Alum:—In powder by insufflation or solution by atomizer are both very useful. (Bos.)

Agaricus Chirurgorum:—Used for plugging the nostrils. (F.)

Antipyrin:—20–50 per cent. as spray or the powder by insufflation. (Bn.)

Hot Water:—Of service when atrophic rhinitis exists. (Al.)

Nitrate of Silver:—When a small abrasion or ulcer is the cause, which is accessible, touch the part with a strong solution. (Al.)

Hydrogen Peroxide:—Injections into nostril full strength, is said to be very effective; or a plug of cotton saturated with the remedy may be inserted into the nostril. (T. 98.)

Iodoform Gauze dipped in **Glycerite of Tannin** and used as a tampon is effective. (T. 96.)

Cocaine:—One of the most reliable remedies. It may be applied on pledgets of cotton carried well into the nasal cavity, or better in the following applied with the atomizer:

Cocainæ Hydrochlor.,	grs. xx.
Aq. Destill.,	3 ss.
M. Ft. sol. et adde	
Ol. Voschano,	
Vel. Ol. Petrolati, vel Ol. Olivæ,	ad. ʒi. (Bos.)

Zinc Sulphate:—The powder or stronger solution of about 40 per cent. (F.)

The following are also recommended for applica-

tion in the form of sprays, or on little mops of cotton, or in more severe cases on tampons:

Tr. Hamamelis; Tr. Perchloride of Iron; Liq. Ferri Sulph., ʒi, Water, ʒviii; **Vinegar or Acetic Acid,** 1 part to 5 of water. (Rd.) (B.) (Al.)

Tamponing the anterior and posterior nares at the same time, after the usual method described in all surgical works, is necessary in severe cases. A soft rubber catheter, however, is preferable to Bellocq's. (Jac.)

Plugging with Small Sponges:—This may be done in the following manner: Introduce into the interior nares a small piece of sponge, tied to a short silk ligature; push it back along the floor of the nose to the posterior nares; a small piece of sponge about the size of a marble, with a hole in the centre of it, is then threaded on the ligature through the hole; it is then pushed backward until it comes in contact with the first piece. Then another is introduced in the same way, and so on until the cavity is completely filled up and the hæmorrhage arrested. The sponges should be rendered thoroughly aseptic, and should also be washed in some antiseptic solution. They may remain in from twenty-four to forty-eight hours. (Whar.)

Cauterants:—The galvano-cautery or chromic acid crystals on a silver probe may be used when the patient is not bleeding, but has recently done so. By throwing a strong light up the nostrils the affected parts may be seen and touched. (T. 97.) The galvano-cautery is condemned by Bosworth, who says when the bleeding points can be located a crayon of nitrate of silver or a crystal of chromic acid will usually answer the purpose, and if these fail an ordi-

nary silver probe heated to a dull heat over a spirit lamp will take the place of the galvano-cautery, at the same time being very much more available and more easily applied.

EPITHELIOMA.

Extirpation by the knife is favored by most surgeons, who advocate its performance in all cases when practicable except those of the most superficial nature, early removal being regarded as a matter of urgent necessity. Dermatologists, on the other hand, incline decidedly to the use of caustics, reserving operative measures entirely for those parts where it is possible to remove a large amount of tissue without injury to the patient. Caustics they also regard as more certain of success and productive of less deformity.

From the surgeon's standpoint there are two classes of cases in which non-operative treatment is of service; those in which the lesion, as first mentioned, is of a most superficial character, and where such treatment is often successful; and those in which operative measures are absolutely refused, or where from the nature of the case they are not deemed advisable.

Non-operative treatment should aim at the complete destruction of the diseased tissues and no superficial caustics should ever be used, for they do more harm than good.

The following are some of the most important methods suggested for the local treatment of this disease:

Arsenious Acid:—This agent holds the first place among escharotics and forms the basis of several well-known pastes.

Arsenical pastes should have the consistency of firm butter; the strength and duration of applications will vary according to the character of the cancer. Hardaway says he regulates the strength according to the case, never making it weaker than equal parts, or stronger than Marsden's. The same writer also says that the desired action must be obtained, otherwise the patient is injured. Antiseptic dressings are not necessary, as the toxins from the pus organisms are of service in destroying pathological epithelia. (B. H.)

Marsden's Paste:—Composed of 2 parts of arsenious acid to 1 of gum acacia rubbed together and made into a paste with water which is added just before applying. It is exceedingly painful and causes œdema. It must be left on for twelve to twenty-four hours, according to the endurance of the patient. The application must be repeated if the growth is not destroyed. Poultices are continually applied after the removal of the paste until the slough separates. (Kp.)

Manec's Paste:—This has stood the test of time. (See Cancer, under arsenious acid, for formula.) Before application, the diseased part must be thoroughly cleansed of all crusts and detritus by the use of poultices, etc. Then the paste is to be spread on lint and closely fitted and held firmly in place by plasters. The applications must be kept up for one or two weeks, at the end of which time the eschar falls off. (For the other arsenical preparations of this nature see Cancer.)

Caustic Potassa:—According to Van Harlingen this remedy never fails to remove superficial growths when properly applied. A stick of the potassa is wrapped in a rag, leaving the point exposed. This is first passed over the surface gently, in order to dissolve the horny epithelia; afterwards it is bored down into every part of the growth. When applying it will be seen that the unhealthy tissues readily gives away. The action of the caustic being always a little beyond the point of actual contact, this fact must be taken into consideration when operating near important organs. Severe pain will be caused which may be neutralized by the application of a 4–8 per cent. solution of cocaine. Dilute acetic acid or weak vinegar should be applied with cloths, to neutralize the caustic influence when it has gone far enough and also to lessen the pain. The part should be dressed with olive oil or some soothing ointment and changed daily. At the end of a week or ten days the eschar falls off. After which a rapidly granulating surface appears, which leaves only a small scar after healing.

Methyl Blue:—Solutions of 1–20, hypodermically, when the growth is deep seated. (T. 96.)

Pyrogallic Acid:—This remedy is considered by many observers as the best; it has the advantage of being almost painless; 1 drachm to the ounce is the usual strength of its application, which should be continued consecutively for from two to six days. It will have to be reapplied from time to time and the slough scraped away. (F.)

Citric Acid:—A lotion for the relief of pain is made from a solution of 5–6 grains to 1 oz. of water. (Al.)

Schwimmer's Treatment:—This is adapted to su-

perforial epithelioma, and to some forms of the infiltrating variety. The growth is scraped out thoroughly with a dermal curette, the diseased tissues readily giving way. Hæmorrhage should be stopped by pressure. After curetting pyrogallic acid in an ointment (1-2 parts of base) is applied for four or six days. The ointment produces a black crust and free discharge; at the end of the four to six days this should be softened by applications of carbolized vaseline left on for a day or two. After its removal apply mercurial plaster, under which the part will heal. (Ja.)

Zinc Chloride:—Though rarely indicated is sometimes employed in solution, paste, or stick. It destroys both normal and diseased tissue, though not in equal degree. It may be used in papillomatous growths until the base is reached, then another caustic should be used. Solutions of this agent may be injected into small tumors, where arsenious acid and caustic potassa cannot be used.

The formula known as Bongard's Paste, which is usually employed, is as follows:

Farinæ Tritici (Wheat Flower),	
Amyli,	āā ȝ i.
Pulv. Acid. Arseniosi,	grs. viii.
Hydrarg. Sulph. Ru'br.,	ȝii.
Ammon. Chlorid.,	ȝii.
Hydrarg. Chlor. Corros.,	grs. iv.
Zinc. Chlorid., Cryst.,	ȝ i.
Aq. Fervid.,	ȝ iss.

This paste is spread on muslin and left on for twenty-four hours. If the application is successful all the diseased tissues will appear necrosed. When the growths are large, several applications are necessary. (B. H.)

(For other preparations of this remedy see Cancer.)

Lactic Acid:—A powerful caustic. Equal parts

mixed with finely powdered silica are spread on gum paper and allowed to remain on from twelve to twenty-four hours. (Ja.) The concentrated acid has also been used applied on cotton cloths and covered with an impermeable tissue and bandage. The surrounding skin should be protected with adhesive plaster. After the removal of the caustic, the part should be cleansed with cold water and dressed with water dressing for from twelve to twenty-four hours. (N.)

Nitric Acid:—10 parts of the fuming acid with 4 of perchloride of mercury, made in a syrup by the addition of bibulous paper, is said to form a good caustic which will leave excellent cicatrices. (T. 96.)

Chloracetic Acid:—This is less suitable than stronger escharotics, but will be of service when the disease is close to some important organ, as the eye, where the influence of the caustic must be circumscribed. Its action not being deep, applications must be repeated at intervals; a stick or probe covered with cotton may be used. (Al.)

ERYSIPELAS.

A great variety of local remedies have been advised for this affection, many of which are not only unnecessary, but of questionable utility, especially in the milder types, when only the simplest applications, if any, will be required.

As the exclusion of air from the surface is grateful, the part should be covered with a light dressing, and when the face is the seat of the affection a light linen

or muslin mask, saturated with the selected remedy, may be worn with benefit.

Cold Water Dressings:—Suitable for mild cases, forming an important and useful adjuvant; they should be changed frequently. (Gn.) After mentioning a number of applications, Osler adds that perhaps these dressings are as good as any.

Carbolized Olive Oil:—1 per cent. for facial erysipelas. (Den.)

Ichthyol:—The most highly praised of all remedies. It is used in various combinations. Before applying, the affected part should be cleansed with soap and water, then washed with a solution of bichloride of mercury; the ichthyol preparation should then be thickly spread on and covered with cotton batting. (Al.)

A 50 per cent. ointment with lanoline is recommended by Unna, covering after with salicylated cotton. It is claimed that it arrests the progress of the disease. (T. 96.)

With Collodion, Unna has found the following pigment of service:

Ichthyol,	
Ether,	āā 3 ss.
Collodion,	3 i. (Al.)

With Traumaticine it is said to have aborted 60 per cent. of cases. The proportions are ichthyol 3 parts, traumaticine 10 parts; this combination, which makes a dark brown liquid, should be applied to the diseased area with a brush, and at least three-quarters of an inch beyond. (F.)

The remedy is said to be indicated in all varieties of the disease. (Sj.)

Lead and Opium Wash:—This old fashioned rem-

edy is still regarded as one of the most effective. It is useful to allay the burning. Use Laudanum, 2 parts, and Liq. Plumbi Diluti (U. S. P.), 4 parts. (Ty.)

Trichlorphenol:—1-2 per cent. ointment is very effective. (F.)

The following solutions are recommended applied with cloths saturated with the same:

Boric Acid, saturated solution. (St.)

Carbolic Acid, 1 drachm with half a pint each of alcohol and water, applied every alternate hour (Ja), or half a drachm to a pint of milk; the latter is said to greatly relieve. (Rd.)

Borax, 3ss—Oss. (Hel.)

Picric Acid, 6-1000. This remedy has been highly praised. (F.)

Grindelia Robusta, 2 drachms of the fluid extract with water half a pint. (Al.)

Resorcin, 2 or 3 per cent. solutions. (F.)

Hydrastis, 1 part of the tincture to 5-6 of water. (M. H.)

Belladonna, 1 part of the tincture; 1 part of glycerine; 8 parts of water, recommended by Piffard. (Ja.)

Veratrum Viride, 1 drachm of the tincture; tepid water, 2 ounces, one of the best local remedies. (Ga.)

Calamine lotion. (M. W.)

Glycerite of Starch, forms an agreeable substitute for greasy preparations. (M. W.)

Alcohol:—Cloths kept saturated and covered with some impermeable material. Reported to have been successfully employed in thirty-two cases, when disease was situated on the face and other parts. (Sj.)

Vaseline.—For application to the face forms a convenient dressing. (F.)

Cosmoline:—Preferable when an ointment is used, as it interferes less with the function of the skin. (Al.)

Benzoated Collodion, made with equal parts of the compound tincture of benzoin and collodion. (B. H.)

Ferric Perchloride:—1 per cent. solution in ether is said to act quickly in aborting. (T. 96.)

Salicylic Acid:— ʒss-i with cosmoline ʒi has been employed with satisfactory results. (Al.)

Bichloride of Mercury:—1–1000 sprayed on the part at a distance of four inches, and repeated four times daily, has been successfully employed. In using this treatment the eyes should be protected and hair, if present, should be cut off. (Vn.) Solutions of 1–5000 as a dressing have also been employed. (St.)

Method of Koch:—Creolin 1 part, Iodoform 4 parts, Lanolin 10 parts. Applied not only on the affected area but one inch beyond on healthy skin. (Al.)

Method of Hollopeau:—A mask of several thicknesses of linen is soaked in a solution of **Sodium Salicylate** 1–20, and applied over the part. A rubber cloth is put on over this to prevent evaporation. Relief, it is said, is almost immediate and cure rapid. (An.)

Method of Wœfler:—A simple piece of adhesive plaster an inch in width and sufficiently long to surround the part is applied an inch or more from the advancing border of the disease. The firmer the pressure the greater the chance of success, which is said to be very marked. This procedure is preferable to that of the Kraske-Reidel method. (B. H.)

Carbolic Acid Injections:—1–2 per cent. solutions are used for injections in the part surrounding the

diseased surface. This method is painful and liable to cause abscess; at the same time it has been successful. (Os.)

Pilocarpine:— $\frac{1}{6}$ grain hypodermically injected in the same manner as carbolic acid, until physiological effects are produced, has been used. (B. H.)

Kraske-Reidel Method:—This consists of scarification partly in the healthy and partly in the diseased skin; then the application of gauze wet with a solution of bichloride of mercury 1–1000. The method is painful and causes scars and therefore is not suited for use on the face. It is to be employed only for the more grave form of the disease and is not generally commended. (B. H.)

Bichloride of Mercury Injections:—This procedure is only justifiable when the size of the area involved is not sufficiently great to require enough of the bichloride to endanger poisoning. The injections are made around the involved area. Wyeth says he has used a solution of 1–500 around an erysipelatous patch an inch in diameter without causing untoward symptoms. As the injections cause pain, local anæsthesia is necessary. (W.)

This method is adapted to severe forms of the disease.

ERYSIPELAS, PHLEGMONOUS-CELLULITIS.

Free Incision and Drainage:—As soon as pus is formed, incisions should be made and drainage established. (Q.) Park says that the treatment of threat-

ened phlegmon consists primarily in free incision down to the deepest tissue involved, even to the bone itself if necessary. (Pk.) After incision the parts should be cleansed and irrigated with an antiseptic solution. (Den.)

Carbolic Acid and Hydrogen Peroxide:—Preferable in this disease for irrigation to solutions of corrosive sublimate. (Den.)

Antiseptic Baths:—The immersion of the parts when possible in a bath of a hot weak antiseptic solution is beneficial. (Den.)

Antiseptic Fomentations:—After incision large borated or carbolized fomentations should be applied. (Tre.)

ERYTHEMA SIMPLEX.

Soothing and astringent lotions are indicated. The following are serviceable:

Acid. Hydrocyanic. Dil.,	℥i.
Bismuth. Subnitrat.,	℥i-ii.
Aq. Aurant. Flav.,	℥iv.

Or,

Pulv. Zinc. Carb. Præcipitat.,	
Pulv. Zinc. Oxidi,	
Pulv. Amyli,	
Glycerini,	āā ℥iv.
Aquæ,	Oss. (Vn.)

Or,

Acid. Carbolici,	℥ss.
Zinc. Oxidi,	℥ii.
Glycerini,	℥i.
Aq. Rosæ <i>vel.</i> Liq. Calcis,	q. s. ad. ℥viii. (B. H.)

Dilute Lead Water or Lead Water and Laudanum, or Alcohol and Water are also useful in many cases. Powders are difficult to keep in contact with the skin, and ointments, as a rule, do not agree.

Alkaline Baths are sometimes serviceable.

Zinc Acetate:—Grs. ii, rose water ʒi, recommended by Tilbury Fox. (Al.)

Bismuth Subnitrate, Zinc Oxide, with equal parts of Starch or Lycopodium powder or Talc., as dusting powders. (Bt.)

ERYTHEMA INTERTRIGO.

Cleanliness is the most important feature of treatment. Wash the parts with a little Castile soap and water, dry with a soft towel and apply mild dusting powders such as Starch, Lycopodium or equal parts of the latter with Zinc Oxide or Buckwheat Flour, Bismuth, Subnitrate or Boric Acid.

McCall Anderson's Powder:—A very useful compound. It is composed as follows:

Pulv. Camphoræ,	ʒi-ii.
Pulv. Amyli,	
Pulv. Zinc. Oxidi,	āā ʒss.

It is important that the camphor should be an impalpable powder, and that the bottle should be kept tightly corked. (Al.)

Belladonna:—When the thighs and genitals are the seat of trouble, and there is some hyperhidrosis, the tincture may be painted on, followed by powdered zinc oxide. (Vn.)

Lotions are suited to cases of a more obstinate character. The following will prove satisfactory:

Lotio Nigra:—Applied several times a day followed by dusting powders. (Vn.)

Alum and Zinc Sulphate:—Recommended by the late Dr. Tilbury Fox as follows:

Zinc Sulphate,	grs. x.
Alum,	grs. xx.
Glycerine,	ʒi.
Rose Water,	ʒiv. (Al.)

Bland ointments may be of service such as **Zinc Oxide** 1 drachm with **Ung Aq. Rosæ**, ʒi. (B. H.)

Cerates or glyceroles of **Calendula**, **Iodoform**, **Zinc Oxide**, **Hydrastine**, **Boric Acid**, **Carbolic Acid**, etc. (Bt.)

FAVUS.

Great patience and perseverance are necessary for the successful treatment of this obstinate disease.

The hair should be cut short, after which all crusts may be removed with poultices and oil or hot water and soap, as in pustular eczema. Then epilation should be practiced, pulling the hair out not only from the patches, but also for about half an inch around them; this should be repeated every week until no trace of redness exists. (Ja.) After this the scalp is ready for a parasiticide. The following are of service:

Heat:—The disease being sensitive to high temperature the following has proved successful. Compresses wet with a bichloride of mercury solution 1–1000, are applied to the part, and over this a series of Leiter's tubes through which hot water at a temperature of 140°–150° F. is run. Applications may be

continued for twelve hours daily for eight days. (Sj.)

Chrysarobin:—10–20 grains with lanoline, 1 ounce, forms one of the most effective applications. (B. H.)

Tr. Iodine:—Freely applied, recommended by Besnier.

Resorcin:—Used by Crocker, 1 drachm with 1 oz. of lanoline or oil.

Method of Besnier and Doyon:—The following line of treatment is recommended:

Cut off the hair around the patches; then cover the whole head with equal parts of soft soap and lard, allowing this to remain two or three hours; then wash off with warm water and cover the head during the night with a rubber cap. The following morning the head is washed clean and bathed with a solution of boric acid 25–1000, and covered with borated lint soaked in the following:

Sodii Salicylat.,	25 parts.
Sodii Bicarbonat.,	10 parts.
Aquæ,	1000 parts.

Over this the rubber cap is placed. After a few days the scalp will be clean and the dermatitis will have disappeared. Epilation must now be practiced, the hair being extracted from the patches and for an inch around them. The head to be kept covered with the rubber cap. In the evening an antiseptic ointment such as

Bal. of Peru or Oil of Cade,	2–5 parts.
Salicylic Acid, Resorcin, each,	1–5 parts.
Sulphur Precipitate,	5–15 parts.
Lanolin, Vaseline, Lard, equal parts of each to make 100.	

Then each patch is to be covered with mercurial plaster. (Ja.)

Every morning, wash the scalp with tar soap, soak each favic patch with the following.

Alcohol, 90 per cent.,	100 parts.
Acetic Acid (Crystals),	$\frac{1}{4}$ to 1 part.
Boric Acid,	2 parts.
Chloroform,	5 parts.

The following other applications are recommended:

Salicylic Acid, 3–5 per cent., **Carbolic Acid**, gtts. xv–ʒ-ʒi of **Olive Oil**, **Naphthol Oil**, 1 per cent., **Sodium Hyposulphite**, ʒii–ʒi. (B. H.)

Naphthol 5 per cent. ointment (B.) **Hydrarg. Oxid. Flav.** ʒss–ʒi, **Ung. Sulphur**, **Sulphurous Acid**, saturated solution. (Vn.)

Resorcin, **Mercurial** or **Hydronaphthol Plasters** are to be used for constant application to favus of the nails. (Ja.)

When situated on non-hairy parts the disease usually yields to the application of antiparasitic ointments such as those mentioned.

After apparent cure the patient should be carefully watched, and any red point that appears is evidence that the disease is returning, and that treatment should be at once resumed.

FELON.

Alkalies:—A poultice of hard wood ashes, will often abort. (F.)

Nitrate of Silver:—A strong solution in **Nitric Acid**, will abort if applied early. (B.)

Ichthyol:—Equal parts with water, has been used with excellent results. (Al.)

Leeches may be applied above the nail in the early stages with good effect. (Ag.)

Ung. Hydrarg.:—Applied for ten minutes every hour with poultices at other times. (R.)

Iodine:—Will often abort if applied as soon as slight pain is felt. Paint the finger freely, or dip it into the fluid and allow it to dry on; repeat this three or four times a day. (Al.)

Nitric Acid:—Painting the affected part with the fuming acid is said to relieve the pain instantly. (Rd.)

Citrine Ointment:—Has been used with success. (Al.)

Alcohol:—Serviceable in neglected cases when poultices have been long used; equal parts with water form a convenient evaporating lotion. (Al.)

Heat:—Fomentations and dipping the finger in hot water will afford relief of pain and hasten suppuration. (Bt.)

Lobelia:—A saturated compress of the tincture kept constantly applied is said to be efficacious in arresting. (Hel.)

Free Incision is imperative when pus has formed beneath the tendons or periosteum; its neglect will entail much pain and possibly loss of the finger. (Hel.)

GALACTORRHŒA.

Hot Cloths applied for ten minutes and repeated at intervals. (G. J.)

Pressure:—Cover the nipple with sterilized gauze and apply a firm binder; the breasts will then empty themselves. (G. J.)

Camphorated Oil rubbed on will often control the condition. (F.)

Conium:—An ointment of the bruised leaves, may be employed when it is desired to dry up the milk. (Sm.)

GANGLION.

Method of Duplay:—Wash and disinfect the skin as for an operation, then inject 5–6 drops of Iodine into the cyst, the skin being drawn aside so as to

form a valvular opening; the contents are now evacuated and an antiseptic dressing and pressure are applied. The pain is slight, and a cure is generally effected in from five to six days. In large cysts a second injection is sometimes necessary. The syringe should be rendered aseptic. This method is described as safe, simple and invariably successful. (T. 96.)

Subcutaneous Rupture:—Striking the cyst a blow is a time-honored procedure. (Pk.)

Other methods are, **Subcutaneous Division** by a small flat needle and **Injections of Iodoform**. (Mc.) Whatever method is employed pressure and the use of splints are recommended. (Pk.)

GANGRENE.

MOIST GANGRENE:

Apply cotton batting several inches thick around the part, and cover with oiled silk or rubber protective; care should be taken that there is no pressure. Hot water bags and bottles are deprecated on account of the capillary contraction these agents produce. As death of the part progresses all disorganized tissues which can be easily removed should be cut away with the scissors, and an antiseptic dressing applied, such as gauze soaked in sublimate solution 1-500. (W.)

Carbolic Acid, 1 part, glycerine 4 parts; lint soaked in this solution and applied to gangrenous surfaces was used by Lister. The following has been found effective:

Carbolic Acid,	752 grs.
Caustic Soda,	124 grs.
Water,	Oj

Lint soaked in one part of this mixture with four of water and kept constantly applied, covering with oiled silk, will be found effective in relieving the pain and destroying the fetor. The solution may be made more dilute if desired. (M. H.)

Hydrarg. Bichlorid.:—The stronger solution may be employed for cleansing. Gauze soaked in a solution of 1–1000 should be laid around the line of demarcation as soon as formed to guard against septic absorption. (W.)

Poultices of linseed meal, charcoal, yeast or carrots are sometimes of service in removing sloughs. (Bt.)

Free Incisions:—Indicated in phlegmonous or other inflammations when the tension is so great that gangrene is threatened by pressure upon the capillaries and large vessels. The incision should be made parallel with the vessels and sufficiently deep to relieve tension. (W.)

Iodoform and Salicylic Acid:—Among the most effective of the dusting powders after the removal of sloughs to promote healthy granulations. (B.)

Peat, finely pulverized, sprinkled over gangrenous surfaces has been highly praised. (F.)

DRY GANGRENE:

The affected part should be wrapped in cotton and placed in as comfortable a position as possible. (W.) If any local treatment is required that mentioned under the moist variety is applicable.

HOSPITAL GANGRENE:

As soon as attacked the wound should be immediately mopped with some escharotic, the most effective of which are the following:

Bromine:—This agent heads the list and is to be

generally preferred to all others (F.); it proved to be most efficacious in the war of the rebellion. If the disease has progressed for two days, and the wound is covered with the pulpy mould peculiar to the malady, it should be scraped first with a Volkmann's spoon and mopped with the bromine. When the skin has become undermined, free incision should be made so as to expose every part to the action of the caustic, and afterwards dressed with iodoform gauze. In the case of a gun-shot wound the entire track must be scraped out with a piece of cotton immersed in bromine and fastened on a holder. Anæsthesia is necessary. (W.)

Nitric Acid:—Also excellent; ranks next to bromine.

Chromic Acid:—Highly effective; it penetrates the tissues deeply, causing comparatively little pain.

Zinc Chloride and the dried Sulphate:—The powders are both powerful caustics, but the fact that they cause great pain should be remembered. (B.)

Turpentine:—One of the oldest and most efficient applications; the mortified parts are first removed with the scissors and the remedy is applied directly by means of cotton cloths saturated with it. Fetor is removed and sloughing arrested, and but little pain ensues. (B.)

Citric Acid:—Lemon juice dropped into gangrenous wounds which are then covered with lint steeped in a solution of chlorine is said to have good effect. (Pt.)

Resorcin:—A 2 per cent. solution is reported to have succeeded in arresting when other measures failed. (Al.)

Camphor:—The powder, freely sprinkled over flax-seed and charcoal poultices, has been used for the sloughing surfaces both in this form and senile or dry gangrene. (Al.)

Potass. Permang.:—Grs. iii-x- $\frac{3}{4}$ i (B.), and Labarraque's solution, (N.) both form useful dressings to correct the fetor.

Warm Baths:—For gangrenous ulcerations the immersion of the part continuously for about eight hours in a warm water bath, temperature of 95°–98°, was introduced by Hutchinson. After two or three sittings the sores are said to assume a healthy appearance. (Al.)

GASTRALGIA.

Lavage has been productive of good results in cases which have resisted other therapeutic measures, especially those which have resorted to morphine; the water used warm has a soothing effect. (S. B.)

Warm Baths every night for ten minutes and **Faradism** of the stomach should be combined with lavage. (S. B.)

GASTRITIS.

Lavage:—Is of service in chronic gastric catarrh with excess of mucus, and in no other condition has it done so much good. (Ew.) Several quarts of water may be used, but not more than one pint should be introduced into the stomach at once. The morning, before breakfast is usually the best time for administration, but when the mucus collects to a large amount the stomach may be washed out again before dinner, directing the patient to take a light luncheon. (S. B.)

Lavage with Nitrate of Silver:—This is of value in long standing cases of catarrh with hyperacidity. The stomach is first washed out with a weak solution of bicarbonate of soda, in order to remove the excess of mucus, then with a warm solution of nitrate of silver, 20 grains to the quart. Finally the organ is douched repeatedly with a solution of chloride of sodium, 45 grains to the quart. Under this treatment the digestive power of the stomach increases and the vomiting and constipation disappear. (T. 98.)

GINGIVITIS, SIMPLE.

Antiseptic Tooth Wash:—Night and morning, or better after each meal.

Cleanliness:—The absence of cleanliness is often the cause of inflammation in children; hence after nursing the mouth should be washed and patient should be given a little water to drink. (Jac.)

Nitrate of Silver:—1–500 or 1000 brushed on once a day when mucous membranes are dry; recommended for children. (Jac.)

Copper Sulphate:—The powder packed down under the edge of the gums with a wooden point for several days; then use as a mouth wash:

Potass. Chlor.,	ʒ ii.
Sod. Biborat.,	ʒ i.
Potass. Nit.,	ʒ ss.
Tr. Arnicae,	ʒ ii.
Aq. Rosæ,	ad. ʒ viii. (T. 96.)

Removal of Tartar:—Tartar must be most carefully scaled off; then syringe under the gums with hydrogen peroxide. (T. 96.)

Zinc Chloride:—If the tissues are turgid, thickened and inflamed, apply with syringe 20 per cent. solution under edge of gums. (T. 97.)

A useful powder :

Cretæ Præparat.,	℥iv.
Pulv. Radicis Iridis,	℥iii.
Pulv. Saponis Alb.,	℥vi.
Ol. Eucalypt.,	℥ss.
Otto Rosæ,	Mvii.

If there is much destruction of tissue apply every four days with a brush the following :

Ol. Cinnamon.,	℥iv.	
Ol. Gaultheriæ,	℥iv.	
Acid. Carbolic,	℥i.	(T. 96.)

GLANDERS.

Excision, Curettage and Cauterization in the cutaneous form should be practiced as early as possible, following with antiseptic dressings. (Pk.) All suspicious wounds and all ulcers should be freely cauterized. (Q.)

As abscesses form they should be evacuated by free incision and cleansed constantly with antiseptic injections of **Potass. Permang.** or **Carbolic Acid.** (Vn.)

For nasal ulceration, **Iodoform** and the allied dusting powders; sprays of **Bichloride of Mercury**, **Carbolic Acid** and **Hydrogen Peroxide.** (Ty.) **Nitrate of Silver** solutions or **Tincture of Iodine** may be used for touching the ulcers. (Vn.)

GLANDS ENLARGED.

(Compare Adenitis.)

Iodine:—Parenchymatous injections with a hypodermic syringe are often exceedingly valuable, a few drops of the tincture being sufficient. (F.)

Carbolic Acid:—2 per cent. solution injected into the glands which threaten to suppurate will often prevent the formation of pus. (Sm.)

Iodoform:—The officinal ointment useful in many forms of enlargement.

Cadmium Iodide:—The ointment, grs. x-xx- $\bar{z}$ i, in chronic enlargements. (Sm.)

Ichthyol:—As an ointment, $\bar{z}$ iii- $\bar{z}$ i, was recommended by Agnew.

Zinc Iodide:— $\bar{z}$ i- $\bar{z}$ i, as a simple ointment. (Sm.)

Mercury:—The ointment of the red oxide often has striking effect in reducing simple hypertrophy of the thyroid gland, enlarged spleen, or ague cake. (B.) Calomel, $\bar{z}$ i; morphia sulphate, grs. i-iii- $\bar{z}$ i of base, is useful in reducing swelling and arresting abscess. (Sm.)

Conium:—The ointment is useful in reducing scrofulous glands, enlarged mammary glands, enlarged liver and spleen and goitre. (Sm.)

Galvanism:—Often of service in reducing chronic enlargement of cervical gland; the current may be medicated with iodine or ammonia chloride. The positive pole is placed on the back of the neck and the negative over on the gland. Rapid resolution, it is claimed, will take place. (Terry.)

The care of the teeth is very important. Carious teeth are often the means by which the tubercular bacilli gain an entrance and cause tuberculosis of the cervical gland. Of 100 cases in children, 41 per cent. originated from this cause. (T. 97.)

TUBERCULOUS GLANDS:

Unless the primary sources of infection are treated, recurrence is certain. If the gland is softened and

practically analogous to a tuberculous abscess, the following: (1) Incision large enough to admit the finger; (2) scraping throughout with Volkmann spoon; (3) application of pure carbolic acid; (4) stuffing with iodoform worsted. (T. 97.)

GLEET.

In not a few cases of chronic urethritis, local measures are contra-indicated, as frequently the prolonged use of injections and balsamic preparations tend to perpetuate the gleet; in others, however, local applications in conjunction with treatment directed towards the improvement of the general health are of great advantage. Restoration of the normal calibre of the urethra, the cure of the catarrh and the healing of localized areas of inflammation are the essential points in the treatment of this condition. (W. M.)

The first step is to examine the urethra and thus ascertain if possible the local cause of the difficulty. For this purpose the bulbous flexible French bougies or the endoscope may be used.

Chronic urethral inflammation is divided into anterior and posterior chronic urethritis.

Local Treatment for Anterior Chronic Urethritis :

Meatotomy:—When the meatus is contracted, that is, will not admit of the passage of a sound the normal size of the urethra, the contracted condition will often act as a source of irritation and perpetuate the diseased condition. Meatotomy is then advised, followed by flushing of the canal with mild antiseptic solutions and the passage of a sound. To be re-

peated every two or three days, according to the amount of reaction. Cure under these conditions may usually be expected in from two to six weeks. (W. M.)

Nitrate of Silver:—Is the most valuable, 10 drops of a 1 per cent. solution every third day, increasing the strength up to 5-10 per cent., very exceptionally the latter. It is most effective in solutions from 1-5 per cent. and is especially indicated when there is discharge from the posterior part of the urethra with urgent desire to urinate and pain on orgasm. (W. M.)

Iodine and Carbolic Acid:—Equal parts of a 1 per cent. solution of each up to 10 per cent. solutions may be tried when silver fails. (W. M.)

Strong Caustic and Astringent applications are recommended when other measures have failed. It is absolutely essential to determine the precise location of the diseased area, and to apply the remedy with caution, taking care not to leave an excess of the caustic fluid on the mucous membrane. **Nitrate of Silver** fixed upon the end of a blunt probe and touched cautiously to the spot, or a solution of **Sulphate of Copper**, grs. xxx- $\bar{z}$ i- $\bar{z}$ i, may be thus employed. (B. H.)

In some cases the endoscope, although apparently indicated, gives negative results or aggravates the condition; under these circumstances injections or dilatation should be substituted. (W. M.)

Local Treatment for Posterior Chronic Urethritis.

When the inflammatory condition has extended to the posterior portion of the urethra, deep injections or irrigations are necessary. The instrument of Ultzmann or one of its modifications should be used for this purpose, with one of the following solutions:

Bichloride of Mercury, 1-10000.

Carbolic Acid, 1-200.

Nitrate of Silver, 1-5000.

Potass. Permang., 1-5000.

Dobell's Solution.

Injectons can be repeated daily for two weeks or until shreads disappear from the urine, then every second or third day, gradually discontinuing. If the solutions are well borne they should be increased in strength up to 1-2000 of the bichloride, 1-1500 of the silver, and 1-1000 of the permanganate, and every third day a full-sized sound is to be passed. (W. M.)

Thallin Sulphate:—This remedy in 15-20 per cent. solutions is preferred by some surgeons as the best astringent and antiseptic application for general use in the posterior urethra. Solutions of this strength are for direct application and not for injection or irrigation. They may be alternated with irrigations of nitrate of silver or permanganate of potassium. (B. H.)

*Instillations** are of especial service; the remedies which have been generally effective administered in this manner are the following:

Stimulating Applications are indicated when the endoscope reveals the presence of localized areas of hyperæmia, erosions, inflammation and infiltration of the follicles. The following remedies of this nature are for use by direct application through the urethroscope:

Hamamelis:—The pure fluid extract is said to

NOTE.—For method of application of Irrigation and Instillation see Gonorrhœa.

constitute one of the best local remedial agents when applied with a cotton wrapped probe through the endoscope. This will never be found too strong applied in this manner, whereas the same remedy used as a 25 per cent. injection will cause pain and inconvenience. (B. H.)

Nitrate of Silver:—Solution of grs. x- $\bar{3}$ is the best application in superficial catarrh and inflammation of the urethral follicles in the earlier stages.

Iodine, Carbolic Acid and Lugol's Solution, equal parts; same indications as nitrate of silver. **Mercuric Bichloride**, 1-100. **Carbolic Acid**, 10 per cent. in alcohol.

Astringent Injections, such as **Alum, Zinc Sulphate and Carbolic Acid**, are of service after the use of the endoscope for the bleeding and ardor urinæ. (W. M.)

Passage of the Cold Steel Sound:—This will act favorably in a large proportion of cases in dispersing granulations and infiltration and emptying pus distended follicles, and generally tone up the mucous membrane. (B. H.)

Rectal Douches:—When there is irritability of the bladder or sexual neuroses, copious rectal douches may be employed with benefit. (W. M.)

Iodine and Glycerine:—From 3-10 grains of the former to 1 ounce of the latter, is used for painting the urethra through the endoscope; stronger solutions must be used with caution. (B. H.)

Excellent results are claimed for the following combinations, which are introduced through the endoscopic tube:

Iodoform.,	$\bar{3}$ iv.
Tr. Benzoin Comp.,	
Bals. Peruv.,	$\bar{3}$ i.

Or,

Iodi Resublimat.,	grs. xx.
Eucalyptol.,	grs. ii.
Potass. Iodid.,	grs. ii.
'Acid. Carbolic,	gr. ss.
Boroglycerid.,	q. s. ad. $\bar{3}$ ii. (B. H.)

Ointments:—Remedies applied in this way are often beneficial. The ointment is smeared upon the warm sound, which is allowed to cool before introduction, thus causing it to adhere, viz:

Ichthyoli,	grs. xlviii.
Lanolini,	$\bar{3}$ i.

Or,

Argent. Nit.,	grs. v.
Bal. Peruv.,	grs. x.
Ceræ Flav.,	grs. x,
Ol. Theobromi,	$\bar{3}$ i.

Melt over water bath.

Or,

Creolin,	grs. v-xv.
Lanolini,	$\bar{3}$ i.
Ol. Olivæ,	$\bar{3}$ ss. W. M.)

Or.

Potass. Iodid.,	$\bar{3}$ ss.
Iodi,	grs. v.
Ol. Olivæ,	$\bar{3}$ i.
Lanolini,	$\bar{3}$ i. (W. M.)

Strictures, which are often the cause of chronic urethral discharges, should receive appropriate surgical treatment.

GLOSSITIS.

Superficial:—Cleanliness is most important, and all local causes of irritation, such as bad teeth and ill-fitting false teeth, should be removed. (Gn.)

Ice will prove grateful and assist in allaying inflammation. (Gn.)

Bismuth. Subnit.:—5 grains to rose water 1 ounce, is useful and agreeable, or with the addition of a little glycerine.

Mouth Washes containing **Boric Acid**, **Hydrastis**, **Thymol**, etc., are beneficial. (See Aphthæ.)

Parenchymatous.—This form requires more active treatment.

Deep Scarification indicated if the tongue becomes alarmingly œdematous. (An.)

Leeches applied between the hyoid arch and the angle of the jaw, with scarification, are of great service in relieving swelling. (An.)

Steam Atomization:—Medicated vapors, such as those of **Ammonium Chloride** or **Compound Tincture of Benzoin**, favor resolution. (An.)

Incision:—This may be demanded even before the advent of suppuration; the incisions should be made on the superior surface of the tongue on either side of the median line. (Gn.) When incision is followed by vapor of hot water great relief is obtained.

Tracheotomy:—May be required if incision does not relieve, though it is rarely called for. (An.)

(For treatment of Glossitis Dessicans and Fissures, see Fissure of the Tongue.)

GLOTTIS, ŒDEMA OF.

(See Œdematous Laryngitis.)

GOITRE—BRONCHOCELE.

Iodine:—The tincture has been used with better results in the cystic than in the fibrous variety, 8–10 drops may be thrown into the substance of the tu-

mor in different parts every three to five days. Marked elevation of temperature accompanied by pain and stiffness of neck are indications for suspending treatment. (Agnew.) Gosselin's use of iodine in treating cystic goitre consists of incising the skin over the gland and introducing a small trocar and evacuating the contents of the cyst, then cleansing the cavity with sterilized water and injecting 1 drachm of tr. iodine; this is permitted to remain in five minutes; should its discharge be followed by blood a second injection is made. (Pp.) Injections of 10–15 drops, repeated every two or three days until ten injections have been given (L. T.), or 20–30 minims of a solution of 1–12 of alcohol injected twice a week, a new point being selected each time, care being observed not to wound any vessel, are other methods of applicaiton.

Iodoform:—Also employed in several ways; Mose-tig advised as a substitute for iodine the following: Iodoform, 1 part; ether, 5 parts; olive oil, 9, or in the proportion of 1, 7, 7. (Garre.) This is free from danger. (L. T.) It is also used hypodermically with good results in solution or sterile emulsion, and a 10 per cent. solution being employed, and from two to three drops injected in the base of the growth (F.); as an ointment, $\mathfrak{z}\text{ss}$, with benzoated lard $\mathfrak{z}\text{i}$, rubbed in for fifteen or twenty minutes, night and morning; a piece of lint smeared with the same is then laid on and covered with oiled silk. (Pp.)

Red Iodide of Mercury:—A piece of the ointment the size of a pea is rubbed over the surface of the goitre until sensitiveness is produced; in a few days this procedure is repeated, and continued with necessary intermission for weeks and even months. The

rays of the sun are said to help the action. (L. T.) Another method of application is to employ an ointment of the strength of 15 grains of the mercury to 1 ounce of ointment base. A small portion of this is rubbed over the goitre, which is then exposed to the rays of the sun as long as the patient can bear it. Within half an hour a smarting sensation is felt, and at the end of an hour a blister will appear which should be treated in the usual manner. The effect of the drug continues long after the blister has healed, and the tumor is said to decrease. (Al.)

Yellow Iodide of Mercury, ʒi , **Oleic Acid**, ʒix , recommended by Lefferts for fibrous variety.

Perchloride of Iron:—Was used by Mackenzie in place of iodine in cystic goitre; 1 part to 4 of water, injection of 1–2 drachms, according to the plan of Gosselin; the injection is allowed to remain in three days; if the discharge is bloody it is repeated, if purulent the canula is allowed to remain for drainage. During this treatment the neck is covered by flaxseed poultices. (Pp.)

Ergot:—Preferable to iodine in the vascular varieties; 10–20 drops of the fluid extract hypodermically have been employed. (Pp.)

Electrolysis:—Effective to a certain extent, the first applications being followed by a decrease in the size of the tumor, which is less and less marked after subsequent applications. Large needles, insulated to within a short distance of the points, are introduced into the substance of the gland; these are attached to the negative pole; the positive pole is attached to a large flat electrode which is applied over the gland a short distance from the needle. A current of from 5–10 milliampères may be applied for five minutes. (Gn.)

Stronger currents have been advised (Dickson), being regarded as useful in the earlier stages of the disease. A current of 100–150 milliampères is applied for ten minutes at a time, a clay electrode being placed over the goitre and a large wire gauze electrode between the shoulders. When puncture of the growth is made, a current of 50 milliampères is applied for eight minutes. Another method consists of aspiration of the cyst, followed by injection of a hot solution of sodium chloride, 3i–3ii, followed by applications through the canula of a current of 50–100 milliampères for ten minutes; the salt solution is then withdrawn. Rockwell objects to these strong currents. (Sj.)

Extirpation:—When all other means have failed, and the growth is large and causes dangerous symptoms, this procedure must be considered. Better results are obtained from operative treatment than from medical, but the high rate of mortality contra-indicates its use until after all other measures have proved unavailing. (L. T.) (See paragraph on extirpation under Exophthalmic Goitre.)

GOITRE, EXOPHTHALMIC.

Leiter's Coil:—Applied over the lower part of the neck and upper part of the sternum is more successful than any other treatment, according to Osler. It relieves the rapid heart action.

Ung. Hydrarg. Oxid. Rubr.:—Employed as described in simple goitre or bronchocele has also been used for this affection. (L. T.)

Electricity:—*Galvanism*, 25–75 milliampères, is

recommended by Rockwell, using sculptor's clay for electrode; the positive pole is placed over the sixth cervical vertebra and the negative over the region of the solar plexus; the positive pole is shifted to the goitre during the seance; the duration of application is from two to five minutes. (L. T.)

Faradism, positive pole on the neck over the carotid artery at the level of the angle of the jaw and the border of the sterno-cleido-mastoid muscle, on each side; the negative to the orbicularis palpebrarum muscle, thyroid gland and præcordium near the sternum at the line of the third intercostal space; application being made to these localities in succession. (L. T.)

The seance should occupy about six to twelve minutes, and the course of treatment continued from six to twelve months. Electrical treatment, according to Osler, should be tried for more than three or four months.

Hydrotherapeutics:—Act favorably in some cases; packing, needle baths, and sea baths (Pp.) combined with galvanism and message, have had good effect. Cold sponge baths, tepid baths, hip baths. (An.) Mustard to the feet with cold to the thyroid gland are also methods which are worthy of consideration. (Gn.)

Removal of Nasal Hypertrophies have cured a few cases. (Gn.)

Change of Climate and Moderate Elevation have beneficial effects in cases not too far advanced. (An.)

Rest and freedom from excitement are essentials to successful treatment. (Ty.)

Extirpation:—Though statistics show somewhat varying results, they warrant the opinion that if

medical treatment has failed and the symptoms are urgent an operation should be performed. It should be borne in mind that the entire extirpation of the gland is liable to be followed by myxœdema. (An.)

Ligation of the Thyroid Arteries:—This procedure has been employed in some cases; its preference to extirpation is a matter to be decided by the operator according to the indications of each case. (An.)

GONORRHŒA.

Abortive treatment is generally condemned by many recent writers as productive of more harm than good. (Cl.)

Injections:—As a rule injections should not be advised during the advancing stage, as long as internal remedies appear to be acting satisfactorily; weak solution of bichloride of mercury, however, as mentioned in the succeeding paragraphs, may be employed with good effect. In the use of injections care should be observed not to exert force or to overdistend the urethra, nor to send the fluid beyond the first few inches of the pendulous portion; they should not, moreover, be of sufficient strength to cause pain or an uncomfortable sensation of fulness when used for the first time. Injections may be administered three or four times a day and always after urinating. (Cl.)

The selection of the syringe is a matter of importance; it should be conical-pointed and known as "excelsior P," according to Dr. Lydston.

Hydrarg. Bichlorid:—During the advancing stage, injections, if made at all, should be very mild.

A weak solution of 1-20,000-40,000 may be used as a douche with Kiefer's two-ways tube attached to a fountain syringe; 1-2 quarts may be thus administered. (Cl.) These weak solutions form about the best injections for this period of the disease. (B. H.)

Solutions of 1-20,000 or 30,000 may be used by injection with good effect in the secondary stage of severe acute urethritis; inject about 2 drachms. Strong solutions are of doubtful efficacy and may cause intense pain and increase inflammation. (Cl.)

If severe smarting on urination follows, in a day or two, the use of the bichloride, the solution must be weakened or discontinued.

In place of the sublimate during the increasing stage, the following anodyne injection may be given:

Atropin. Sulph.,	grs. ii.
Bismuth. Subnit.,	℥iv.
Mucil. Acaciæ,	
Aq. Destill.,	āā ℥ii.

Shake well and inject three times a day.

Morphiæ Sulph.,	grs. viii.
Cocainæ,	grs. iv.
Mucil. Acaciæ,	℥i.
Aq. Destill.,	q. s. ad. ℥ii. (B. H.)

If mild and sedative astringents in combination with anodynes are desired, the following will be found useful formulæ:

Plumbi Acetat.,	grs. iv.
Vini Opii,	℥ii.
Aq. Rosæ,	q. s. ad. ℥iv.

Inject three times a day.

Or,

Sod. Biborat.,	grs. xx.
Morphiæ Sulph.,	grs. vi.
Aq. Rosæ,	℥iv.

Inject three times a day.

(B. H.)

For a purely sedative effect :

Acid. Borici,	℥ ii.
Aq. Ext. Opii,	grs. xv.
Liq. Plumbi Subacetat., Dil.,	℥ vi. (Cl.)

Hydrogen Peroxide, solution of 1-4 and Potass. Permang., 1-4000, are useful injections for the first stage. (F.)

Pyrogen:—1 per cent. solution can also be used to advantage. (Cl.)

Ichthyol:—1-2 per cent. solution as an irrigation is claimed to be indicated in preference to any other remedy. It may be used in the beginning of the attack, two irrigations daily for five or six days, but if it is not well borne and there is no modification of the discharge suspend until the subacute stage is reached. In the period of decline 1-2 per cent. solutions will generally lead to a rapid cure. The remedy thus employed is painless. (T. 97.)

Zinc:—In the stationary stage of the disease astringent injections in stronger solutions are indicated. The most popular and one of the best is zinc sulphate, though the sulph. carbolate or the iodide are preferred by some.

The following are recommended :

Zinc. Sulphat., <i>vel.</i> Acetat.,	grs. xii.
Morphiæ Sulph.,	grs. x.
Glycerini,	℥ i.
Aq. Rosæ,	℥ iii.

Or,

Zinc. Iodid.,	grs. viii.
Acid. Carbolicæ,	grs. iv.
Aq. Destill.,	℥ iv.

Plumbi Acetatis,	grs. xx.
Tr. Opii,	℥ ii.
Aq. Rosæ,	q. s. ad. ℥ iv. (B. H.)

Zinc. Sulpho Carbolat.,	grs. ii-v.
Aq. Rosæ,	$\bar{3}$ i. (Cl.)

Hydrastis:—One of the most effective of the vegetable astringents, the muriate of the alkaloid being popular.

The following formulæ are efficacious:

Aq. Ext. Hydrastis (Ernesty),	$\bar{3}$ i-ii.
Zinc. Sulphat.,	grs. i-ii.
Aquæ,	$\bar{3}$ ii. (Cl.)
Hydrastin Mur.,	grs. x.
Ext. Hamamelidis, Fld.,	$\bar{3}$ ii.
Glycerini,	$\bar{3}$ i.
Aq. Destill.,	q. s. ad. $\bar{3}$ vi. (B. H.)

“**Injection Brou**” — Well known among the laity, according to Bumstead, is as follows:

Zinc. Sulphat.,	grs. xv.
Plumbi Acetat.,	grs. xxx.
Fld. Ext. Krameriaæ,	
Tr. Opii,	āā $\bar{3}$ iii.
Aquæ,	ad. $\bar{3}$ vi. (F.)

Ricord recommended the following:

Zinc. Sulphat.,	
Acid. Tannici,	āā grs. xv.
Aq. Rosæ,	$\bar{3}$ vi.

Inject half an ounce two or three times daily.

In the stage of decline the strength of the injections may be increased sometimes to double the proportions given. This must be done carefully, and in no instance should any be administered which produces considerable pain. A slight smarting only is to be expected. If any injection is found to cause increased pain or burning on micturition it should be weakened or discontinued. (B. H.)

Gallobromal:—1-2 per cent. solution, said to be

especially efficient as an injection for the relief of chordee. (F.)

Pyoktanin:—Solutions of 1–1000 are effective in killing gonococci. (B.) Solutions of 1–1000–2000 retained one minute, in 68 cases, were painless, in 3 were intensely painful. (Sj.)

Creosote:—Injections of 2–10 per mille of an emulsion were used in 58 acute cases with good results. It seems to have an anæsthetic effect. (T. 97.)

Sulphate of Thallin:—Solution of 20 grains with rose water, 1 ounce, often useful. (B. H.)

Nitrate of Silver:—Frequently of great service. Treatment with this remedy by injections of solution of 1–4000 (gr. i– $\frac{3}{4}$ ix), never stronger than 1–2000, was recommended by Friedheim and Neilson to be instituted early. The immediate effect is to increase the discharge, which in the course of four days becomes thinner, whiter and less abundant. After a fair trial of the above solutions, if the discharge continues, the strength of the injection may be increased to gr. i– $\frac{3}{4}$ iv, or it may be changed to sulphate of zinc or some other astringent. According to Neisser, nitrate of silver stands at the head of the list of remedies for gonorrhœa, and bichloride of mercury second. (Al.) Carleton recommends the remedy for the secondary stage.

When in the stage of decline, examination of the urethra with the Otis urethrometer or bulbous bougie gives evidence of small areas of granulation or urethral inflammation, one or two drops of a solution of the strength of $\frac{1}{4}$ gr.–60 per ounce, but usually 4–10 grs. per ounce may be applied every third day with good results, using for the purpose the Key's-Ultzmann syringe. The best results are said to be

those obtained by commencing with the weakest solution and increasing the strength as indicated, using an instrument devised by R. W. Taylor. About 30 drops of a 1-2000 solution are taken up in an ounce glass syringe with the nozzle drawn to a sharp point, a No. 8 French gum catheter is cut to the length of 8½ inches and introduced to the point desired with the patient standing. The proper amount of the solution is now injected, the catheter withdrawn and a piece of absorbent cotton applied to the meatus, which may be retained by an elastic band or the foreskin to protect the linen. (Cl.)

Solutions of nitrate of silver, grs. iv-xl- $\bar{z}$ i, applied by means of a pledget of cotton on an aluminum probe through the endoscope are indicated when the granulations are large and numerous, but should not be used more frequently than once in four to eight days. (Cl.)

Protargol:—This chemical combination of silver and albumen has been used with gratifying results. It is soluble in both hot and cold water, and may be administered by urethral injection in solution of ½ to 1 per cent. The weaker solution should be used first, and the strength gradually increased to the stronger. About two drachms may be injected and retained for two minutes.

These solutions can be administered as soon as the gonococci are found in the discharge; they do not injure the mucous membrane, but act rapidly in destroying the gonococci. After the disappearance of the latter, astringent injections, such as zinc sulphate, may be substituted. The remedy apparently acts as a prophylactic after exposure to gonorrhœa. (M. T., 11, 98.)

Argonin:—A combination of silver and casein; is very similar to protargol; it is used in 8 per cent. solutions. Its action is also satisfactory, though great care should be observed in its preparation, for unpleasant results will follow an improperly prepared article. (M. T., 11, 98.)

Argentamine:—For anterior urethral injection solutions of 1-4000-5000, and of 1-2000-4000 are recommended. For deep urethral injection 15-30 minims of a solution of 1-500-1000. This remedy, it is claimed, is suited to any stage; it penetrates more deeply than nitrate of silver, which produces, with albumen and sodium chloride, insoluble compounds. The secretion is increased at first, then decreases rapidly. Treatment should continue for about two weeks. (Sj.)

Retraction:—This is more effective than simple injection, but has the disadvantage of requiring assistance for the application of its technique. The patient should sit on the edge of a chair over a basin, then an ordinary woven catheter, well lubricated, is inserted to the depth of about five inches; to the catheter a rubber tubing, 4 or 5 feet long, is attached, which is connected with a fountain syringe or irrigator of 1-2 quarts capacity; the irrigator is then elevated two or three feet until the solution runs in and forces its way out at the meatus alongside the catheter; the urethra is thus washed out with the entire contents of the irrigator. The same solutions may be used as those employed for injections, but, as a rule, they should be somewhat weaker. (F.)

This method is regarded by some writers as not only of difficult application, but of questionable utility, except in cases which have a tendency to become chronic.

Irrigation.—This procedure, which has already been frequently mentioned, is especially indicated when the posterior urethra is involved. The most effective method of application is that of Ultzmann, which consists of the introduction just beyond the compressor urethræ muscle of a short silver catheter with four longitudinal slits instead of the usual eye; a hard rubber syringe of 3–4 ounces capacity is filled with the selected solution and attached by means of a soft rubber tubing, then the fluid is gently injected into the membranous urethra, when, overcoming the internal sphincter, it will flow into the bladder; this repeated until the bladder is filled. When the patient desires, he is allowed to urinate through the urethra, the catheter being removed. Irrigations should be administered in the recumbent posture and the solutions should be well warmed. The same solutions may be used as for retrojection. A favorite method of Ultzmann was to begin with a solution of sulphate of zinc, alum and carbolic acid, each 1 part to 2000 of water; on the next day this was increased to 1–1500, on the third 1–1000, on the fourth 1–500. If this was well tolerated the solution was changed to one of potassium permanganate, 1–2000, which was increased in strength in the same way up to 1–1000, when a solution of nitrate of silver, 1–2000, was employed, which in turn was gradually increased up to 1–1000; in this way the urethra becomes accustomed to the solutions without inconvenience. When it is not desirable to pass a catheter, the bladder may be filled by hydrostatic pressure alone. (F.)

Instillation.—This method is employed for the application of a small quantity of a strong solution to

the posterior portion of the urethra without the anterior being affected. To accomplish this, use the drop syringe, which consists of a short silver catheter with very thick walls and a capillary lumen, to its proximal end a hypodermic syringe is attached; the desired amount of the solution is drawn up into the syringe, the catheter introduced until the end has passed the membranous portion of the urethra, which will be indicated when the long axis of the catheter is at 45° from the vertical, showing that the triangular ligament has been passed, and the injection then made. Strong injections may be administered in this way, nitrate of silver being most frequently employed in strengths ranging from 1–10 per cent. If properly applied none of the injection will return. (F.)

GONORRHŒA IN THE FEMALE:

The external parts should be bathed with solutions of **Calendula** or **Borax**, dried with absorbent cotton, and dusted with **Bismuth Subnitrate** or **Oleate of Zinc**. (Cl.)

Bichloride of Mercury:—Hot vaginal douches of a 1–20,000 solution night and morning. (Cl.) Stronger solutions, as 1–2000, are employed for swabbing out the parts. As soon as the more acute symptoms have subsided energetic treatment is indicated, and the following will be found effective: First cleanse the surface thoroughly with soap and water, and a sponge upon a holder to reach the vaginal inequalities, cocaine being used if necessary; introduce a Ferguson speculum and paint the entire surface with a solution of the bichloride, 1–1000, beginning at the cervix; then wash with warm water, reintroduce the speculum and insert sterilized gauze of three or four

thicknesses to keep the vaginal walls apart and permit of free drainage. This treatment should be repeated daily. (K. C.)

For the urethritis, which occurs as a complication, first inject a 4 per cent. solution of cocaine, then, while making a little pressure upon the vesical end of the urethra, introduce a small glass nozzle and irrigate the canal with a solution of the bichloride of 1-20,000. This may be repeated every day if necessary. (K. C.)

Formalin:—Has been strongly recommended by recent writers; the vulva should be washed with a 1-1000 solution, and before using the speculum wash out the vagina with a 2-3 per cent. solution. Swab out the cervical canal with 1-500, and if the cervix is ulcerated apply a tampon saturated with 1-1000. (T. 98.)

Lysol:—Free irrigation of a 1 per cent. solution is much used. (T. 96.)

Tannin and Alum:—Equal parts, a tablespoonful of the mixture to one quart of water as a douche, forms, it is claimed, when combined with the proper hygienic and therapeutic measures, one of the most effective local remedies. In pregnant women the tannin should be reduced, making 1 part to 4-5 of alum. (F.) Powdered tannin or alum is useful for dusting on granulations after the third week. (Cl.)

Sodium Formate:— $\frac{1}{2}$ -1 per cent. solutions are used. (T. 96.)

Bismuth:—In vaginal capsules, is recommended when the passage of the speculum is prevented on account of sensitiveness of the parts. When instrumentation is possible the daily application of tampons soaked in glycerine or boroglyceride with half a drachm of bismuth has good results.

Zinc Oleate:—Equal parts, with iodoform make an excellent insufflating powder when the surfaces are excoriated. The oleate should be made with Castile soap. (Sw.)

Nitrate of Silver:—Solutions of 2–40 grains to the ounce are effective after the third week for the granulations remaining in the vagina or cul-de-sac. (Cl.) Strong solutions, such as 20 grains to the ounce, are used for inveterate cases, and may be employed in the following manner: Pour the solution into a hollow dish, introduce a Sims speculum, and with a cotton swab on a stick apply the solution over the whole surface of the mucous membrane of the vagina, cervix and vulva; the pain is only temporary, but cocaine may be first applied; as soon as the surface is dry, it should be anointed with vaseline and a small tampon inserted. Douches should follow each fresh dressing. (Sw.) Stronger solutions are used, even up to the saturated. (K. C.) The same remedy is an excellent application for the persistence of the disease in the ducts and glands of Skene; the finger is introduced into the vagina, and by pressing and drawing forward along the course of the urethra, a drop of pus will exude; this condition may be removed by injecting with a hypodermic syringe solutions of 4–40 grains to the ounce. (Cl.)

Picric Acid:—Solutions of 1–1000 are effective for treating the glands of Skene, and may be employed in the same way as nitrate of silver. (Cl.)

Iodine:—The tincture painted on the vaginal wall in the latter stage of the disease is useful when stimulation is indicated. (K. C.)

Gallobromal:—5 per cent. solutions for urethritis

are recommended, injections being made into the bladder. The external parts may be swabbed with a 20 per cent. solution. (Sj.)

GOUT.

ACUTE GOUT:

Local treatment is usually confined to wrapping the part in flannel or cotton batting and the application of alkaline solutions and anodynes such as the following:

Atropiæ,	grs. iii.
Morph. Hydrochlorat.,	grs. xv.
Acid. Oleici,	℥i.

Paint on the painful parts with a large camel's hair brush and cover with cotton and towel bandage. (H.)

Or,

Lin. Belladonnæ,	℥iii.
Morph. Sulph.,	grs. x.

Of this, use 1 tablespoonful to half an ounce of hot water and apply every two hours on lint, covering with oiled silk. (H.)

Hot Mustard Foot Baths are of service and should be employed in retrocedent gout. (H.)

The following has been reported as effective:

Take half an oz. of **Iodide of Potassium** dissolved in a 8 ozs. of **Rectified Spirit**, add 1 ounce of **Soap Liniment**, then half a drachm each of **Oil of Cloves** and **Oil of Cajuput**; a cloth soaked in this mixture is wrapped around the affected part and covered with protective and bandaged. This acts as a powerful counter-irritant and the inflammation, it is claimed, is subdued in from twelve to twenty-four hours. The treatment appears to have been employed in robust cases. (T. 98.)

CHRONIC GOUT: (See Arthritis.)

GUMBOIL.

A roasted Fig applied as hot as can be borne to the inflamed gum will often afford relief. A small portion of Chamomile Flowers dipped in hot water and for convenience placed in a little lace bag, similarly applied, is also effective. When pus has formed it should be evacuated by free incision. No poultice should be placed on the face.

GUMS, SPONGY AND ULCERATED.

Alum:—Excellent when the gums are spongy, with tendency to recede from the teeth; it may be advantageously combined as follows:

Alumin.,	ʒi.	
Tr. Cinchon.,	ʒss.	
Tr. Myrrh.,	ʒii.	
Mel. Rosæ,	ʒii.	
Vini,	Oj.	
As a mouth wash.		(B.)

Tannin:—Same indications as for alum; also useful in mercurial salivation, viz:

Acid. Tannici,	ʒi.	
Mel. Rosæ,	ʒii.	
Aquæ,	ʒvi.	
As a mouth wash.		(B.)

Tannate of glycerine applied with a brush also effective. (Sn.)

Chromic Acid:—One of the best applications when gums tend to ulceration and retraction in scrofulous cases and after mercurial salivation. (N.)

(See Stomatitis for further formulæ, as many of the mouth washes under that head are also applicable to this condition.)

HÆMATEMESIS.

(See also Hæmoptysis.)

The application of a broad flat **Ice Bag** over the epigastrium, together with the subcutaneous administration of **Ergotine**, will generally prove effective.

HÆMOPTYSIS.

The patient should be placed in the recumbent posture, with head and shoulders elevated. He must be kept absolutely quiet and not allowed to speak except when necessary.

Ergot or **Ergotine**:—Subcutaneously administered is generally employed. (Gn.)

Morphia:—One of the most effective remedies in dangerous cases; it must be given hypodermically in full doses, $\frac{1}{4}$ grain two or three times in twenty-four hours for an adult. (Gn.)

Liq. Ferri Subsulphatis:—Sprays of a solution of $\mathfrak{z}\text{i}$ – $\mathfrak{z}\text{viii}$, caused to enter the throat with each inspiration, will often arrest, notwithstanding so little will pass the rima glottidis. (B.)

Ice to the nape of the neck and chest (Rd.), also to the testicles or labia. (Sj.)

Ether Spray to spine and chest. (Bt.)

HÆMATURIA.

Local measures can only be of service when the bladder itself is the source of the bleeding in this case. **Nitrate of Silver**, $\frac{1}{4}$ gr.— $\frac{3}{4}$ i, as a wash will prove valuable. (Al.)

HÆMORRHAGE.

Local astringents and styptics: **Alum**, **Agaric.**, **Alcohol**, **Antipyrin.**, **Creolin**, 2-3 per cent. solution, especially adapted to hæmorrhage from mucous membranes; **Ice**, **Oil of Turpentine** for hæmorrhage after removal of tonsils or extraction of teeth; **Styptic Cotton**, **Tannic Acid**, **Cold Water**, **Hot Water**, **Hamamelis**, **Monsel's Solution**, and **Tr. Ferri Chloridi**.

Actual Caution:—Of inestimable value in arresting hæmorrhage from vessels not possible to ligate.

Ergot or Ergotine:—Subcutaneously, the fluid extract of the former, or better the following solution of the latter:

Ergotinæ,	grs. xxx.
Glycerini (neutral),	
Aquæ,	āā $\frac{3}{4}$ ss.
Dose, 15 minims.	(T. 96.)

Aq. Ammonia:—One or two drachms with an equal amount of water subcutaneously injected is

advised when thrombosis of a large venous trunk tends to form, as for example in the pulmonary artery after uterine hæmorrhage. (B.)

Ether:—Subcutaneous injection of 1 drachm into the thigh as a stimulant. (B.)

Intra-venous Saline Injections:—This is the practice in England when life is threatened. The following is the formula of a powder which, added to a pint of water, constitutes a solution of the normal salinity of the blood :

Sodii Chloridi,	grs. L.
Potassii Chloridi,	grs. iii.
Sodii Sulphatis,	grs. iiss.
Sodii Phosphatis,	grs. ii.
Sodii Carbonatis,	grs. iiss.

The temperature varies with different operators; some say it should be less than 100° F., and others prefer it hot as the hand can bear. (T. 96.)

Artificial Serum, Subcutaneously:—Employed in desperate cases by subcutaneous injections of 1½ parts into the thigh of the following:

Sodii Phosphatis,	
Sodii Chloridi,	āā ʒii.
Aquæ,	Oij. (T. 96.)

HÆMORRHAGE FROM BONE :

Yellow Wax:—A convenient way of arresting bleeding from cut ends of bones, after amputation, is by forcing a small bit of wax into the cancellated structure. (Al.)

HÆMORRHAGE FROM THE LARYNX :

The following should be applied by means of the laryngeal atomizer :

Ferri Alumin. Sulph., grs. x-ʒi.

Liq. Ferri Nusulphat, grs. x-ʒi.

Acid Tannici, grs. xx-ʒi.

Argent. Nitratis, grs. x-ʒl. (Bos.)

HÆMORRHAGE POST-PARTUM :

Immediately pass the hand into the uterus and turn out all clots or fragments of the placenta, clearing the cavity of its entire contents. Grasp the fundus with one hand, previously dipped into ice water; if this can be done without delay, hold the uterus firmly and press it down into one iliac fossa, and as quickly as possible inject a stream of water at a temperature of 110°–120° F. If delay will be caused in obtaining hot water use cold, or pass into the uterus a piece of ice. While this is being done an attendant should raise the foot of the bed so that the hips will be elevated. After the hæmorrhage has been sufficiently controlled, the lower extremities should be tied snugly, but not tight, with bands, and a compress and binder applied over the uterus. (Ga., Ply.)

Turpentine:—A piece of lint saturated with the remedy carried directly into the uterus, so as to be in contact with the inner surface, will act as a stimulant, produce contraction, and instantly check hæmorrhage. (T. 98.)

Tr. Iodine, Tr. Matico and Vinegar applied to the cavity of the uterus are effective for arresting hæmorrhage. (Ply.)

The following method of applying **Pressure** was recommended by Playfair: Insert the fingers into the posterior cul-de-sac of the vagina and apply pressure; then with the other hand make counter pressure over the abdomen; thus the anterior and posterior walls of the uterus are pressed together. (Ply.)

If alarming symptoms persist, **Compress the Abdominal Aorta**, to the left of the spine, on a line with the umbilicus. (Ply.)

Perchloride of Iron:—When everything else has

failed, as a last resource inject a solution of iron into the uterine cavity, using liq. ferri perchlorid. 1-6 of water, or 2 drachms of the perchloride in a pint of water. (Ply.)

Faradism:—If a battery should happen to be at hand, apply one pole to the uterine cavity and the other over the abdomen. This will produce contraction.

Subcutaneous injections of **Ergot** or **Ergotine** and **Intravenous Saline Injections**, as mentioned under the head of hæmorrhage are, all indicated in this condition.

HÆMORRHAGE FROM THE RECTUM:

The rectum should be examined by means of a speculum, and the bleeding point ligated or cauterized with the Paquelin cautery. In case the point cannot be located, packing must be resorted to. Mr. Allingham's method for this procedure is as follows: Take a cone-shaped sponge and pass a strong ligature through it near the apex; it is then brought back so that the apex is held in the loop; the sponge is now dampened, squeezed out, and dusted with an astringent powder, preferably iron, introduced by the index finger, apex first, and carried up five inches; the ends of the ligatures should extend outside the anus; the rectum below the sponge is now packed with cotton and dusted over with an astringent powder; the ligatures are now seized and pulled down with one hand and pushed up with the other. Attention is called to the fact that when it becomes necessary to pack the rectum it should be done with great thoroughness, so that not a single point shall be exempt from pressure. (Gt.)

If it is intended to leave the packing in for some

time it is advisable to pass through the apex of the sponge a large stiff catheter so as to allow the escape of flatus and fluid fæces. (K.)

Irrigation with very hot or cold astringent solutions are effective, such as **Alum Water** or infusion of **Black Oak Bark**; simple **Hot Water** with compression is also satisfactory.

Local treatment for rectal hæmorrhage may be summed up as consisting of ligation, cauterization, torsion, compression, styptics, astringents and hot and Cold Applications. (Gt.)

HÆMORRHOIDS.

EXTERNAL :

Treatment is seldom sought unless there is external inflammation.

Hot Baths, frequent ablution of the part with Castile soap and water, together with **Rest** in bed and the application of the **Ice Bag**, will prove grateful and effectual in most cases.

Hot Fomentations may be used instead of the ice bag if the latter is not agreeable.

Bathing the part should precede all remedial applications.

The following anodyne ointments and lotions will afford relief :

Ext. Belladonnæ and **Ext. Opii**.—The two extracts together or alone smeared over the part will afford relief. (All.)

Lead and Opium Wash.—Constantly applied hot or cold is very effective. (Gt.)

Stramonium Ointment, alone or with equal parts

of **Gallic Acid Ointment**, is one of the most serviceable remedies. (Al.)

Hamamelis.—The aqueous extract often used hot or cold according to the effect on the patient. A little may be injected into the rectum.

After washing the parts, Mr. Allingham recommends one of the following:

Bismuth. Subnit.,	ʒ ii.
Hydrarg. Subchlor.,	ʒ i.
Cocainæ,	grs. iv.
Vaselini,	ʒ i.

Or,

Bismuth.,	ʒ ii.
Cocainæ,	grs. vii.
Vaselini,	ʒ i.

Or,

Liq. Plumbi Subacetat., dil.	ʒ i.
Liq. Opii Ext.,	ʒ iv.
Tr. Belladonnæ,	ʒ ii.

When the piles are down and difficult to replace or retain, Mr. Allingham recommends the following applications spread on lint:

Ung. Elemi,	ʒ ss.
Ung. Sambuci,	ʒ ss.
Bal. Copaibæ,	ʒ i.
Ext. Belladonnæ,	ʒ ss.

Or,

Ext. Belladonnæ,	ʒ i.
Ext. Hyoscyami,	ʒ ii.
Ext. Conii	ʒ ii.
Vaselini,	ʒ i.

Nutgalls.—The ointment alone or with 1 drachm of powdered opium to the ounce. (Sm.)

Nitrate of Silver.—Painting the piles daily with a 2 per cent. solution is said to act very satisfactorily; the application is painless. (T. 98.)

Iodoform:—Suppositories containing 5 grains each will sometimes have good effect. (Sm.)

The following is recommended: Wash the part with a 2 per cent. solution of carbolic acid or 1 per cent. of creolin, dry with absorbent cotton and anoint with the following:

Chrysarobini,	grs. xii.
Iodoformi	grs. ivss.
Ext. Belladonnæ,	grs. ix.
Vaselini,	℥vi grs.xv.(Sn.)

The pain will be relieved and the tumor will almost completely shrivel within three or four months.

The following also prove useful:

Cocainæ Muriat.,	grs. xx.
Morph. Sulph.,	grs. v.
Atrop. Sulph.,	grs. iv.
Pulv. Acid. Tannici,	grs. xx.
Vaselini,	℥i.
Ol. Rosæ,	q. s.

Apply after each evacuation of bowels. (Sn.)

Or,

Acid. Gallici,	grs. x.
Ext. Opii,	
Ext. Belladonnæ,	āā grs. iv,
Ung. Simpiciis,	℥ss.

Apply night and morning. (Sn.)

The following is indicated when the pile contains a hard clot:

Morph. Sulph.,	grs. iii.
Hydrarg. Chlor. Mitis,	grs. xii.
Vaselini,	℥i. (Gt.)

The following is a useful cerate:

Morph. Oleate (10 per cent.),	1 part.
Camphor,	2 parts.
Oil of Sassafras,	4 parts.
Resin,	8 parts.
Yellow Wax,	16 parts.
Benzoated Lard,	24 parts. (H. F.)

Apply on lint; melt the Wax, Resin and Lard together at a gentle heat, then digest the Camphor with the mixture until it is dissolved, allow it to cool, and before it solidifies add the Morphine and Sassafras, and mix thoroughly. (H. F.)

Collodion:—Applied on fibres of cotton and spread over the pile after defecation. (T. 98.)

Æsculus Hippocastinum:—Cerates or suppositories will often give good results. (Bt.)

Collinsonia:—The cerate, especially when associated with uterine disorder. (Ga.)

Boric Acid:—An ointment with vaseline has good effect in relieving the itching. (Ga.)

After inflammation has subsided the hæmorrhoids should be removed.

INTERNAL :

Hamamelis:—Employed satisfactorily in various ways, viz: Small injections of the watery extract, either hot or cold; compresses, wet with the lotion, applied externally, or ointments or suppositories. (All.)

Cold:—Some patients will derive benefit from the application of ice to the inflamed part; small injections of cold water will also be found suited to some cases. (K.)

Heat:—May be used instead of cold in the same manner, hot fomentations and hot sitz baths especially if there is strangulation of the pile. (F.)

Suppositories of the following:

Chrasarobini,	grs. $1\frac{1}{4}$.
Iodoform,	gr. $\frac{3}{10}$.
Ext. Belladonnæ,	gr. $\frac{1}{6}$.
Ol. Theobromæ,	grs. xxx. (Sn.)

If there is severe hæmorrhage, tannin may be added. It is claimed that under the above treatment, which may be combined with the ointment of the

same, when there are external hæmorrhoids (see that subject) that pain and hæmorrhage will disappear within three or four days and the tumors shrivel completely within three or four months.

Or this :

Cocainæ Hydrochlor.,	grs. vii.
Aq. Ext. Opii,	grs. xx.
Ext. Belladonnæ,	grs. xii.
Ung. Populi,	℥i. (Sj.)

Cutol:—10 per cent. ointment. (Sj.)

Hydrastis:—An important remedy used in the form of suppositories; it may be combined with good effect, each suppository to contain the following:

Hydrastis,	3 grains.
Hamamelis,	3 grains.
Cocaine Hyderchlorate,	$\frac{1}{4}$ grain.
Coca Butter,	q. s. (M. H.)

Stramonium:—The ointment has a soothing effect and may be combined with cocaine and hamamelis. (All.)

Tannic Acid:—In various strengths in ointment and suppositories may be employed when there is much inflammation. (F.)

Ferric Sulphate:—In the form of suppositories, 2 grains each, when a strong astringent effect is desired. (F.)

This sedative ointment is recommended by Shoemaker:

Ext. Opii,	grs. x.
Pulv. Stramonii,	℥i.
Pulv. Tabaci,	℥ss.
Ung. Simplicis,	℥ss. (Sn.)

Zinc. Subgallate:—As an antiseptic and dessicant,

pure or diluted with an inert powder, or in the form of an ointment. (F.)

Conium Ointment:—May be applied with benefit for the relief of pain. (M. W.)

For small vascular tumors Mr. Allingham uses:

Ferri Sulph.,	grs. x-xx.
Cocainæ,	grs. viii.
Vaselini,	ʒi.

Or,

Ferri Sulph.,	grs. ii.
Theobromæ,	q. s.

The **Injection of Carbolic Acid** has been highly commended and severely condemned. The latest writers are adverse to the procedure.

For the methods of removal of hæmorrhoids the reader is referred to works on surgery.

HAY FEVER.

(Compare Acute Rhinitis.)

Cocaine Hydrochlorate:—One of the best palliatives for treatment of the exacerbations; may be applied in the form of a spray, by insufflation, or with a brush; occasionally the relief obtained will last for the day, but more frequently it is transitory. For the spray a simple 4 per cent. solution may be employed, which is the usual strength, but not infrequently weaker solutions will act quite as well.

The following are recommended by Bosworth:

Cocainæ Hydrochlor.,	grs. xx.
Sodii Bicarb.,	
Acid. Boric.,	āā grs. x.
Aquæ	ʒi.

Cocainæ Hydrochlor.,	grs. x.
Aquæ,	q. s.
Ft. sol. et adde	
Cosmolini Fld., <i>vel.</i>	
Ol. Voschano,	ʒi.
Shake well before using,	

Insufflations of cocaine may be used according to the following:

Cocainæ Hydrochlor.,	grs. x.
Bismuth. Subcarb.,	ʒi.
Magnesiae Carb. Levis,	ʒii.

Or,

Morph. Tartrat.,	gr. i.
Cocainæ Hydrochlor.,	grs. x.
Sulphuris Flor.,	ʒss.
Sac. Lac.,	ʒiiss. (Bos.)

Menthol:—Preferred to cocaine by Ball; 5–10 per cent. solutions in albolene or some other of the petroleum derivatives are employed with the atomizer.

The same writer recommends the following:

Rect. Spirits with 2 or 3 parts of water.

Chromic Acid, gr. $\frac{1}{16}$ – $\frac{1}{8}$ –ʒi.

Quin. Sulph., grs. ii–xi–ʒii.

Sulphurous Acid and water, equal parts.

Carbolic Acid, 1 part to 60.

The following was advised by Sir Andrew Clark:

Glycerine of Carbolic Acid,	ʒi.
Quinine Hydrochlorate,	ʒi.
Mercury Perchloride,	gr. $\frac{1}{5}$.

Paint on the floor of the nose to naso-pharynx; two or three applications will sometimes suffice to cure a paroxysm for the season, but the immediate effects are exceedingly irritating. (Ba.)

Acetic Acid:—2 per cent. solutions as nasal washes. (T. 98.)

Boric Acid and Salicylic Acid:—Equal parts as an insufflating powder. (Al.)

Sodium Bisulphate:—Solutions of 1–5000 in water as a nasal wash. (T. 98.)

HEADACHE.

When congestive, **Hot Foot Baths**, **Mustard Foot Baths** or **Mustard Sinapisms** to the back of the neck are of service. (Wa.)

Cold Water Effusions to the head or **Ice Bag** will sometimes relieve both the congestion and bilious sick headache; on the other hand **Warm Applications** will suit some cases better. (R.)

Morphine:—A hypodermic injection of a small dose acts frequently with excellent effect and is one of the most reliable remedies, at the same time one to be avoided until other means have been tried. (Ty.)

HEART DISEASES, CHRONIC.

The Schott Treatment:—This consists of exercises and carbonated brine baths, and is practiced with beneficial results at Nauheim, Germany. By the use of artificial baths the treatment can be carried out at home. The following is an outline of the home treatment:

Synopsis of exercises. (Thn.)

1. Movement of extended arms in three directions.

(a) From ordinary position by the sides of the body forward and upward until they reach the temples and back again.

(b) From the same position, laterally outward and upward to the temples and back again.

(c) From the horizontal position with the palms of the hands meeting in front of the body as far apart as possible and back. Rotation of the extended arms about their axes as fully as possible, causing pronation and supination.

2. For the elbow, wrist and finger joints the natural flexions and extensions; radial and ulnar abduction and adduction.

3. (a) Flexion of trunk forward from a little beyond the erect position and back.

(b) Lateral flexions of the trunk to the right, left and back.

(c) Rotation of the trunk on its axis to right, left and back.

4. Movements of each extended leg forward, upward, outward, upward, backward, upward and back.

5. The natural flexions and extensions of the knee and ankle joints.

Resistance is made by the attendant with the palm of the hand in the direction exactly opposite to the movement. In applying it to the wrist or ankles these parts should be placed in the fork formed by separating the thumb and index finger, and the limb should never be grasped lest support be given. The degree of resisting force should be as much as the patient can overcome without the slightest discomfort, and it should be applied uniformly and evenly. The patient must be able to breathe quietly; the mouth and *alæ nasi* must be watched, and on the slightest indication of shortness of breath there should be a pause. Some of the movements may be omitted, according to circumstances; the arms above the head and the trunk exercises are the most trying.

The limbs must not be allowed to fall suddenly after the completion of a movement. The clothing should be loose and easy, and a considerable interval of time be allowed between the movements. This should be prolonged if there is fatigue.

The exercises are usually given for about half an hour, the series being gone over twice in that time, but they are frequently employed for a shorter or longer period. A skilled attendant is, of course, necessary. (Thn.)

Two new exercises, not resisted by the operator, have recently been suggested by Dr. T. E. Satterthwaite, assisted by Dr. H. V. Barclay, which are described as follows:

The patient lying on his back with the head a little elevated, the operator standing at his side passed his two arms under the chest and then raised it slowly and gently as far as possible without lifting the patient off his bed. Then the chest was allowed to settle back into its normal position. This movement was of the nature of artificial respiration, and was useful in the cardiac degeneration of obese persons and in some cardiac cases, with respiratory embarrassment owing to chronic pulmonary disease, for in some rare cases of chronic pulmonary disease with a cardiac complication, great relief and benefit might be obtained for the patient without danger, if such respiratory exercises were judiciously applied.

Another of these respiratory series consisted in elevation of the shoulders. The patient sitting on a stool, and the operator on another stool behind him, grasped the axillæ of the patient from in front; he then lifted the patient's body upwards as far as it would go without leaving the stool, and then drew

the body over backwards, pressing his knee against the hollow of the patient's back. The boy was then allowed to settle down easily into the original position. (M. T., 4, 98.)

The Artificial Nauheim Baths:—A scheme for a six weeks' course of baths would be about as follows:

First Week.— $\frac{1}{2}$ per cent. warm sea salt bath (2 lbs. to 50 gals.). Temperature 94–95 degrees F. Duration 4 minutes. Intermission on third day.

Second Week.— $\frac{3}{4}$ per cent. warm salt bath (3 lbs. to 50 gals.). Temperature 93–94 degrees F. 6 minutes. Intermission on fourth day; $\frac{1}{4}$ per cent. carbonic acid gas.

Third Week.—1 per cent. warm rock salt bath (4 lbs. to 50 gals.). Temperature 92–93 degrees. Carb. acid gas, $\frac{1}{2}$ per cent., 8 minutes. Intermission every fourth day.

Fourth Week.— $1\frac{1}{4}$ per cent. bath salt, warm (5 lbs. to 50 gals.). Temperature 91–92 degrees F. Nauheim concn. brine salts, 8 oz., 10 minutes. Carb. acid gas, $\frac{3}{4}$ per cent. Intermission fourth day.

Fifth Week.— $1\frac{1}{2}$ per cent. bath salts (7 lbs. to 50 gals.). Temperature 90–91 degrees F. Nauheim concentrated salts, 10 oz., 12 minutes. Carb. acid gas, $\frac{3}{4}$ per cent. Intermission fifth day.

Sixth Week.—2 per cent. bath salt (10 lbs. to 50 gals.). Temperature 80–88 degrees F. Nauheim concentrated salts, 12 oz. and carb. acid gas. 1 per cent. 14 minutes. Intermission every fifth day.

It is stated in conclusion that the patient does not always feel better after a bath. There might be some precordial oppression, but this discomfort usually passed away at the end of a week.

Baths and exercises each accomplished the same re-

sult, but the most rapid and brilliant results were obtained when both were used together. But they were useful only up to a certain point; after this has been reached they were harmful, and if at any time there was a tendency to relapse, the baths should be suspended. Generally, however, to be resumed again after a day or two. The final steps in the treatment consisted in two or three weeks of rest at some place of moderate elevation. In successful cases the improvement was gradual and sometimes did not fully show itself until the patient had resumed his ordinary mode of life. The improvement might continue for many months, sometimes for more than a year. (M. T., 4, 98.)

The contra-indication in the entire range of chronic cardio-vascular affections are advanced arterio-sclerosis, decided degeneration of the cardiac muscles and aneurism. (T. 98.)

HEMIPLEGIA.

(See Paralysis.)

HERNIA, STRANGULATED.

The patient should be placed on his back in bed, the foot of which should be elevated about twelve inches, the pelvis raised upon a pillow, the legs flexed upon the thighs and thighs upon the abdomen, or the knee and shoulder position may be assumed. (W.)

Hot Applications:—Hot baths should be tried or towels dipped in hot water partly wrung out and

laid on the tumor, and constantly renewed, will sometimes assist in relieving. (W.)

Ice:—A bag filled with ice is also employed. (F.)

Opium narcosis should be secured at once to relieve the pain and relax the parts. **Morphia**, subcutaneously, or opium suppositories may be administered. (W.)

Ammon. Chlorid.:—In the absence of ice dissolve 5 parts of the ammonia with 5 parts of nitrate of potash in 16 parts of water; the temperature of the combined solution will fall from 50 to 10 F. This is placed in a bladder and applied to hernial tumors to promote reduction. (Al.)

Chloroform Inhalation to assist in reduction has superseded the use of tobacco and lobelia. (P.)

Lobelia:—The infusion may be given by enema with good effect. (F.)

Tobacco:—Enema of the smoke or one containing not more than 15 grains has proved of great value, but lobelia is generally to be preferred. (F.)

Taxis:—If applications do not succeed in an hour or two reduction should be attempted. All efforts in that direction should be gentle; a trial should first be made without anæsthesia, then if unsuccessful, with an anæsthetic. (Ger.) The neck of the tumor should be grasped between the thumb and finger of one hand and the contents gently pushed into the canal with the other. Taxis should not be continued more than five or ten minutes at a time; it may be repeated at intervals of half an hour during the first six hours of the strangulation, after that it is of doubtful utility, if not harmful, and after twelve hours should not be attempted. (W.)

Operation:—When strangulation is not reduced

herniotomy should be performed within six hours after the accident, and should never be delayed more than twelve hours. Better results, says Wyeth, are obtained if the operation is performed during the earlier period.

HERPES LABIALIS.

(See Herpes Simplex.)

HERPES CIRCINATUS.

(See Trichophytosis Corporis.)

HERPES PROGENITALIS.

Usually little treatment will be required. Cleanse the parts, apply an antiseptic lotion, then dry and dust on a mild powder, such as equal parts of bismuth subnitrate and zinc oleate (Cl.), or apply a piece of lint soaked in **Lead Water** or **Black Wash**. (Vn.)

Calomel:—Pure or with equal parts of **Zinc oxide** sprinkled on night and morning is useful when stimulation is required. (Vn.)

Aristol or **Airol**:—Useful for abrasions. Astringent lotions are indicated if there is a tendency to recurrence.

Cold Douches to the lumbar region for half a minute twice a week, extra cleanliness, and the application of a little **Alcohol** on the first indication of

the appearance of the eruption constitutes effective preventive treatment. (Cl.)

HERPES SIMPLEX.

Treatment is very simple, consisting of soothing and emollient applications; if on the lip a little **Cold Cream** or **Oleate of Bismuth Ointment** (see McCall Anderson's ointment under **Acute Eczema**). Care should be observed not to detach the crusts too soon.

In extensive cases of herpes of the face apply **Bread and Milk Poultice**, **Dilute Lead Water** or **Boric Acid** in the powder, and when there are crusts some mild ointment. (Vn.)

Camphor:—Will often abort the vesicles, and may be applied in the form of spirits or equal parts of the powder with borax. (B. H.)

Flexible Collodion:—Very useful, especially for the lips. (F.)

Ichthyol:—1 per cent. solution, or an ointment of **Zinc Ichthyolate**, 1 per cent. (B. H.)

The following antiseptic lotions are recommended:

Resorcin, 2 per cent.; **Thymol**, 3 per cent.; **Menthol**, 2 per cent.; **Tannin**, 2 per cent., applied frequently.

HERPES ZOSTER.

It is important to prevent rupture of the vesicles, which leads to ulceration. To attain this end avoid ointments and apply bland astringent powders, such as **Bismuth**, **Zinc Oxide** or **Starch**, or paint the

part with **Flexible Collodion**, combined with morphine (grs. x- $\bar{3}$ i), or alone. A soft linen bandage should complete the dressing. (Pp.)

A useful dusting powder is as follows:

Morphiæ Sulph.,	gr. ii.
Fulv. Amyli,	
Zinc. Oxidi,	āā $\bar{3}$ ss. (Vn.)

Electricity:—The constant current, according to Duhring, will relieve if it does not abort. (B. H.) The sponge electrode is placed along the course of the nerves; and directly to the seat of the eruption, five to ten cells may be used, and the application should be made for fifteen minutes twice daily. (Vn.)

The following lotions will prove useful: **Lead Water**, **Lead and Opium Wash**, **Fld. Ext. Grindelia**, $\bar{3}$ ss-Oj, or **Zinc Carbonate Precipitate**, **Powdered Starch** and **Glycerine**, each $\bar{3}$ ss with water Oss. (Vn.)

The following forms an effective lotion for the relief of pain; it should be applied with wadding pads, frequently renewed:

Alcohol,	$\bar{3}$ i.
Menthol,	grs. xv.
Ext. Cannabis Indic.,	grs. xxv. (T. 98.)

Cerates of Calendula, **Camphor**, **Veratrine**, half strength, and **Zinc Oxide Ointment** are indicated. (Bt.)

Cerate of Cocaine:—May be used with some caution, according to the extent of exposed surface involved. (M. W.)

Ext. Belladonna or **Ext. Opium**:—An ointment of either, in the strength of 20 grains to the ounce, may be rubbed on when the eruption occurs on the scalp. (Vn.)

HICCOUGH.

Whiskey, Vinegar, Hot Brandy, or Mustard Plasters over the epigastrium frequently act very speedily.

Blisters to epigastrium.

Cold Shower, for the physiological effect of shock on the pneumo-gastric nerve.

Ice or Leeches to epigastrium, especially in inflammatory forms. (T. 96.)

Deep Inspirations and holding the breath as long as possible is effective in mild cases. (Ta.)

The following measures have been reported by Sajous as having been successfully employed in obstinate cases.

Dry Cups over the abdomen; energetic **Pressure** of the soft part of the patient's thumb against the little finger of the same hand; **Morphia** and **Atropia**, subcutaneously, in sufficient doses to induce sleep; pungent snuff or other **Sternutories** to produce hard sneezing have succeeded after failure of other means; **Apomorphia**, subcutaneously, to produce emesis has been followed by relief; **Massage**; **Nitrite of Amyl** inhalations. (Sj.)

Pilocarpine:—Has succeeded when all other remedies have failed, in doses of $\frac{1}{10}$ grain three times a day subcutaneously. It appears best suited to cases of nervous origin. (T. 96.)

Hard Pressure over epigastrium, a firm bandage or belt. (Bt.)

The various forms of **Electricity** should be tried in intractable cases. (T. 96.)

HIRSUTES.

Electrolysis:—This is the most effective and successful method of treatment, and should be performed to depilation. Its action is permanent. (F.)

The growth of the neighboring fine hairs appears to be stimulated by the electricity, hence the operation must be repeated. When carefully performed little scarring will result. (Vn.)

Epilation:—This consists in removing the hairs and inserting and rotating in each hair follicle a glover's needle which has been dipped in carbolic acid. (Kp.)

Depilatory Powders:—These agents commonly contain **Arsenic Tersulphide**, **Barium Sulphide**, **Calcium Sulphide** or **Quicklime**. They are not to be relied upon, being temporary in effect. They, moreover, cause a renewed growth of coarser hair, and redden and inflame the skin. When for any reason they may be required, the following can be employed:

“Rusma of the Turks.”—Orpiment 1 part, quicklime or chalk 10 parts, starch 10 parts. (F.)

Delacroix's “Poudre Subtile.”—Orpiment 4 parts, quicklime 30 parts, powdered gum 60 parts. (F.)

“Réviel's Mixture:”

Calcii Sulphid.,	3 v.
Ess. Limon.,	gtts. xx.
Amyli Glycerit.,	
Amyl.,	āā 3 iiss.

Duhring recommends:

Barii Sulphid.,	3ii.
Amyli,	
Zinc. Oxidi,	āā 3iii.

Or,

Sodii Sulphid.,	℥ii.
Cretæ Præp.,	℥vi. (F.)

The following is said to be in vogue in Turkey:

Arsenici Trisulphuret.,	℥ii.
Calcis Vivi,	℥ii.
Amyli,	℥ii-v.
Aq. Bullient.,	q. s. (Vn.)

These powders are made into a paste and applied to the skin; as soon as dry they are washed off. The last is allowed to remain on from five to ten minutes, or until a tingling sensation is produced, then the skin is washed and powdered with starch.

HORDEOLUM.

Warm Fomentations or Hot Stupes afford the most relief and hasten suppuration. (N. O.)

Nitrate of Silver:—Applied early will abort; a solution of grs. v–℥i, is recommended by Bull, and one of grs. xx–xl–℥i by Roosa.

Hydrarg. Oxidi Flav.—An ointment of grs. v–℥i rubbed in is useful in the beginning of the affection. (Ro.)

When the swelling points it should be punctured with a Baer or Graefe knife. (N. O.)

Errors of refraction should be investigated as they may act as a cause.

HYDROCELE.

Tr. Iodine:—After evacuating the sac, inject one-half to one drachm of a tincture made with crystals

of iodine 1 part to 19 parts of alcohol 95 per cent.; this is allowed to stand uncorked for a few days. In infants a weak solution of iodine or collodion applied externally will cause the hydrocele to disappear. (Cl.)

Another method for the use of iodine is the following: Puncture the sac with a trocar and allow about one-third of the fluid to flow away, then inject about three-quarters to 1 drachm of a one per cent. solution of **Cocaine**; after an interval of five minutes the fluid is drawn off and tincture of iodine pure or mixed with one-third water is injected, and the whole evacuated after five minutes. (Sj.)

Injection of iodine causes great pain and swelling with refilling of the sac, which will require rest in bed for a few days with the use of hot fomentations and anodynes, but the results are generally satisfactory. Contra-indications to its administration are the presence of pus or blood in the effusion, and thickening or calcareous degeneration of the walls of the sac. (Cl.)

Carbolic Acid:—After evacuation, injection of 30 minims of the liquified acid (carbolic acid 8 parts, glycerine 1 part); sloughing never occurs unless a greater quantity is used. This procedure is comparatively painless, the inflammatory action much less than with iodine, and the patient is not forced to rest more than a day, sometimes not at all. (Cl.)

Injection of 30 minims of a freshly prepared solution of equal parts of the pure acid and glycerine are also recommended. (Sj.) The contra-indications in the use of carbolic acid injections are the same as those for iodine.

Treatment by Open Puncture:—The sac is tapped in the usual way with a trocar and canula, but the

latter is left in situ to act as a drain; a light cotton dressing and a slightly compressing bandage is then applied. A fenestrated drainage tube may be passed through the canula, which is then removed and the tube left in its place. For two or three days the sac is irrigated with a mild antiseptic solution, and at the end of three days the tube is shortened and finally removed. (T. 96.)

Another method, viz: Introduce a trocar into the lower part of the sac and evacuate the contents, then wash out the cavity with a 3-5 per cent. solution of carbolic acid. The trocar is now pushed through the sac wall and brought out at its upper end, a fenestrated drainage tube is passed through the canula and the exudations thus allowed to escape without accumulating; antiseptic dressing should be applied and the tube removed on the eighth day. No anæsthesia is said to be necessary. Cicatrization requires from eight to ten days. (T. 96.)

Ammon. Chloride:—Lint saturated in solutions of grs. x- $\bar{z}$ i and kept continuously applied is used with advantage in congenital hydrocele. (Al.)

After injecting iodine or carbolic acid a certain amount of manipulation of the part must be made in order to bring the injected fluid in more intimate contact with the tissues.

HYPERRHIDROSIS.

(See Bromidrosis.)

HYSTERIA.

The **Rest Treatment**, which has been successful in the hands of Dr. S. Wier Mitchell, consists in **Isolation, Rest, Diet, Massage, and electricity.** The fol-

lowing is a general outline of the method: The patient should be removed from previous surroundings, away from all relations and friends, even correspondence being interdicted for a time. The next essential is an intelligent and sensible nurse, the selection of whom is a matter of great importance; she must not only be agreeable and congenial to the patient, for it must be remembered she is to be her constant and only companion for some months, but she must also possess tact, judgment, and firmness. Under the nurse's care the patient is put to bed and kept in a condition of absolute rest, even reading and self-feeding at first being prohibited. Massage is used daily at the commencement for short periods, which are gradually increased until it is continued for an hour. Faradism is also administered in association with massage; but these measures are discontinued during menstruation. The diet during this period is milk, used by some skimmed, but unskimmed milk diluted with ærated water is preferable; from 4-6 ounces are given every two hours. This diet is continued as a rule for a week or ten days, when a chop, raw oyster, with a cup of tea or coffee, are added at luncheon, later an egg and bread and butter at breakfast; the milk is continued every two hours.

The nurse should give the patient a thorough sponge bath daily. In a month or six weeks the patient is allowed to sit up for a short time, after that for a longer period, increasing each day, until the whole day is spent out of bed. This return from the long rest in bed must be very gradual. Later, the patient is taken out for a drive, then, in time, for a short walk, then gradually for longer walks, each time increasing the distance, until long distances are

covered with little fatigue. As a rule, about three months will be necesasry to carry out this treatment, which has given most satisfactory results. (S. W. M.)

(For a fuller description the reader is referred to Weir Mitchell's book, "Fat and Blood," and Goodno's "Practice of Medicine.")

ICHTHYOSIS.

Treatment, though largely palliative, must be active and continuous. The skin should be kept moist and supple by frequent warm baths with alkalis and soap, the free use of Russian baths, and by prolonged warm baths followed by inunctions of vaseline, glycerine, lanolin, or oil.

Sapo Viridis:—This may be rubbed in twice daily for four or six days, during which period the patient should not bathe; four or five days after the last rubbing, when the epidermis begins to peel, a bath is to be administered followed by some simple ointment, such as oil of almonds, glycerine, pure or diluted, or the following:

Adipis Benzoat.,	3iv.	
Ung. Petrolii,	3i.	
Glycerini,	3iv.	(Vn.)

Naphthol:—5 per cent. ointment, or 2 per cent. in spirits of soap. (Kap.)

Resorcin:—3–20 per cent. ointments well rubbed in and covered with bandages, have been successful. (Ja.) Brocq recommends the following, to be rubbed in at night and removed with soap in the morning:

Acid. Salicylici,	
Acid. Tartarici,	
Resorcin.,	āā ʒi.
Sulphur. Præcipitat.,	ʒiss.
Adipis,	ʒi.
Lanolini,	ʒiii. (Vn.)

Ichthyol in combination with **Salicylic Acid** and **Sulphur** may be employed as follows:

Ichthyol,	ʒii-iv.
Acid. Salicylici,	ʒi.
Sulphur. Præcipitat.,	ʒii.
Adipis.	ʒiv.

To be applied night and morning and washed off with Ichthyol Soap.

Potass. Iodide:—The following is said to act well:

Potass. Iodid.,	grs. xx.
Ol. Bubuli,	
Adipis,	āā ʒss.
Glycerini,	ʒi. (J. C. S.)

Cod Liver Oil by inunction and **Sulphur Ointment** are both recommended.

ICHTHYOSIS HYSTRIX:

The treatment is essentially that of any warty, non-malignant growth. The patches, if not large, may be softened by poultices and then treated with **Caustic Potassa**, **Chromic Acid**, or **Glacial Acetic Acid**, or the growths may be removed by the dermal curette or by excision. (Vn.)

Thuja:—The fluid extract painted on has had good effect. (Vn.)

Salicylic Acid:—A 20 per cent. plaster or a saturated alcoholic solution is recommended after the removal of the horny covering. (B. H.)

IMPETIGO.

According to Duhring, this affection tends to spontaneous recovery, and beyond the use of a mild stimulating ointment no treatment is required.

Iodoform or **Salicylic Acid Ointments** are used by Hardaway. (Hd.)

The following line of treatment is suggested by Van Harlingen: **Poultices** rendered antiseptic by the addition of a little **Boric Acid** should be used to remove the crusts, the entire surface of the body should be frequently cleansed with warm water and **Corrosive Sublimate Soap**, then compresses wet with a saturated solution of **Boric Acid** or of **Bichloride** 1-2000, should be applied to the diseased points. If ulcers form beneath the crusts they should be cleansed with **Hydrogen Peroxide** and dusted with **Dermatol**, **Euophen** or **Aristol**, or some antiseptic ointment may be applied.

IMPETIGO CONTAGIOSA.

Children suffering from this disease should be kept from school and separated from other children.

Hydrarg. Ammoniat.:—This remedy is very generally used by dermatologists, and, together with cleanliness, in most instances is all that will be required. It is employed in ointments of 5 (Kp.)—10-15 grains to the ounce. (Hd.)

Bismuth Subnitrate:—With vaseline or cold cream, a drachm to the ounce. (Al.)

INFLUENZA.

(See Acute Rhinitis.)

INGROWING TOE NAIL.

The following method, it is claimed, will result in a permanent cure:

1. Remove injurious pressure, and order careful measurement for shoes, the uppers of which should be of a less unyielding nature than usual; during actual treatment the patient should wear canvas shoes.

2. Wash the feet with warm water and soap, then soak for fifteen minutes in bichloride of mercury 1-4000; repeat this daily for four days.

3. A small piece of antiseptic gauze is to be gradually and gently inserted between the nail and overlying tissue; this must be done gently, otherwise it is very painful; the gauze should be removed before washing.

After this the tissues will become considerably separated from the nail, which can be trimmed where in contact with the soft parts. After soaking, the gauze is to be inserted as before. Within a week, it is said, the parts will have assumed almost a normal appearance, and the patient will be able to go about. The gauze should be continued for some weeks.

A modification of this plan has been found useful, viz: In place of the soaking, apply a compress saturated in a solution of carbolic acid or perchloride of iron and cover the same with rubber tissue. After two days' application, the gauze may be used as above and the nail trimmed. (T. 98.)

The following, suggested by Dr. W. O. Terry, is also said to be successful: Saturate a small piece of absorbent cotton in a solution of *Liquor Potassæ* 1

part to 4 of water; then, with the flat end of a director, insert the cotton under, over and above the edge of the nail, allowing it to spread over the ulcerated hypertrophied tissues; next freely apply collodion over the whole, including the inflamed surface; after this, with a long, narrow strip of surgical isinglass plaster, attach an end close to the nail on the swollen part and bring it around the toe two or three times, drawing the hypertrophy away as much as possible; if the case is bad, it will require four or five dressings, which should not be changed under forty-eight hours. (Hel.)

An old method, which will sometimes afford relief in the earlier stages, consists of scraping in a line from the matrix to the extremity of the nail; the external layer may be thus removed; when the middle is reached there will be sensitiveness and the scraping must cease; a deep notch is now cut in the extremity of the nail. The ingrowing parts are now to be partly raised with a probe and small bits of tinfoil inserted; a hole should be cut in the boot to relieve pressure. This process of scraping and notching should be continued for several weeks, when a cure will result. (Hel.)

Collodion:—Pack cotton firmly under the free edge of the nail with a flat probe passing between the nail and the granulation, raising the former as far as possible; the cotton having been thus packed under and around the nail, saturate the entire mass with collodion; after drying apply a few strips of adhesive plaster. (Al.)

Nitrate of Silver:—Apply a sharp-pointed crayon to the base or under the surface of the granulations, then insert a small piece of lint soaked in black wash, and envelope the toe in water dressing. (Al.)

Tannic Acid:—1 part to 6 of water, dissolved by gentle heat and painted on soft parts twice daily has given good results. (Al.)

Calendula:—Very useful for the relief of inflammation; compresses soaked in a solution of 1 part to 5 of carbolized water may be applied with good effect. (M. H.)

Alum:—A solution of 6 drachms to 1 ounce of hot water is very effective for inflammations. (W. C.)

Cocaine:—This remedy is most useful for the relief of pain in dressing, also after applying a ligature around the toe; it may be given hypodermically, and thus render removal of whole or part of the nail entirely painless. (Tre.)

Antiseptic dusting powders will be found useful in ulceration notably **Bismuth Subnitrate**. (Al.)

Removal of the nail is sometimes necessary.

IRITIS.

Local or mechanical treatment is of the greatest importance to prevent adhesion of the iris to the capsule of the lens; this is accomplished by mydriatics.

Atropine Sulphate:—This is commonly used, and in most cases preferred to other mydriatics, on account of its sustained action; a drop of the 1 per cent. solution is placed on the outer surface of the conjunctiva of the lower lid, the patient holding the head back so that the outer canthus is lower than the inner. In acute cases of plastic iritis one drop of a 1 per cent. solution should be dropped in the eye every two hours during the active stage. (Mac.)

Scopolamine:—A solution of 2 grains to the ounce

of distilled water, is a better mydriatic in persons over 50 years of age, and in cases where glaucoma is threatening, as atropine will precipitate an attack of the latter and will make it worse if present. This mydriatic is more active than atropine and will tear up adhesions quicker. (Boyle.) For quick action, which is necessary in plastic iritis, scopolamine hydrobromate, in solutions of $\frac{1}{10}$ of 1 per cent., is to be preferred to atropine, using 2 drops at a sitting, repeating as necessary. (T. 98.)

Cocaine Hydrochlorate:—2 per cent. solutions are used to relieve pain. (T. 98.) It is frequently combined with atropine, not only for its anæsthetic effects, but because it assists in dilating the pupil by its action on the iris and by increasing the absorbing power of the cornea. (Al.)

Duboisin Sulphate:—One-half per cent. solutions may be used when atropine causes irritation of the skin or conjunctiva. (T. 98.)

Hyoscyne Hydrobromate:—One drop of a 1 per cent. solution may be instilled in cases where the adhesions are so strong that they resist the action of atropine. It is a very powerful remedy, and should only be used by the physician himself; the action may be kept up by atropine. (Mac.)

Cold:—Applicable in three ways; in the first place, tie a piece of tape around the patient's head and to it attach a square of linen which covers the inflamed eye, a basin of ice water is placed conveniently near and from it the square of linen is kept constantly moistened. The second method consists of the application of a pad of cotton wool which has been laid upon a block of ice and which is changed as soon as it ceases to give the sensation of cold. A block of ice

is placed near the bed-side and two pads kept in use, one cooling on the ice while the other is on the lids. The third plan is a modification of Leiter's coil, being the same apparatus, but of much lighter construction and especially adapted to this purpose. (N. O.)

Heat:—May be applied either in the moist or dry form. Several folds of lint are dipped in hot water, squeezed out as dry as possible, applied to the lid and covered with oiled silk. This dressing is then packed in with a thick layer of dry cotton heated by contact with a can or pail containing hot water, and bandaged in position. Another and equally effective way consists of the rapid application of a fold of linen which has been wrung in hot water and which is rapidly replaced as soon as cool. Hot infusion of **Chamomile Flowers** or **Poppies** are permissible, also **Conium Lotion**, 1 drachm of the extract to 1 pint of water; or **Belladonna** in the same proportions. Hot applications are useful during the early stage of the disease (Ro.), and may be ordered two or three times a day, for a half hour at a time. It is advisable when the skin is sensitive to protect the lid and neighboring parts with vaseline. (N. O.)

Dry heat can be applied by covering the lid with a pad of cotton which has been heated by contact with the outside of a vessel containing boiling water. (N. O.)

Local Abstraction of Blood:—A time-honored remedy, may be used if pain and vascular injection is very severe. Natural or artificial leeches may be used. (Ro.)

INSOMNIA.

Warm or Tepid Baths at night, **Massage**, or **Wet Pack** are all of value. (Gn.)

Injections of Hot Milk high into the bowel is useful in cases of alcoholism and insanity.

INTERTRIGO.

(See *Erythema Intertrigo*.)

KERATITIS.

Atropine:—Renders great service by contracting vessels, it is useful in all forms according to the condition. (Ro.)

Eserine:—In the phlyctenular variety, one five-hundredth solution dropped into the eye three times a day will be found valuable in hastening the healing of the ulcers, and in relieving the photophobia, by contracting the pupil and reducing the tension of the eyeball. As iritis is seldom a complication, this remedy is generally safe. (Mac.)

Pyoktanin:—Solutions of 1–1000 in the parenchymatous and sloughing forms are highly praised as well as discredited. (Al.)

Cocaine:—Alone or in combination with atropine to relieve pain and check inflammation. (Al.)

Gallicine:—In superficial forms, the powder, which is very light, may be dusted on, the application being

made twice a week; a smarting sensation follows, which soon passes off or which can be relieved by cold compresses or cocaine. (F.)

Hot Stupes:—Of great value, especially when there is sloughing, in which case they are indispensable. They may be of service in all forms according to indications. (Al.)

Cauterization:—The actual cautery or pure carbolic acid is effective in the suppurative variety. (Ro.)

Iodoform:—Dusted on or applied as an ointment (3i-3j) is well thought of by some when there is sloughing, but should not be relied upon to the exclusion of other remedies. (Al.)

Hydrarg. Oleat.:—The ointment by inunction in the diffuse form may be thus employed for months, but with great caution. (Ro.)

Aristol:—The powder has been employed with success in clearing of opacities of the cornea in interstitial keratitis. (Sm.)

Mercury:—Finely levigated Calomel as a dusting powder or the Yellow Oxide as an ointment (grs. ss-iv-3i) are recommended for chronic cases. (Al.)

KELOID.

Treatment is unsatisfactory. Removal by the knife is generally followed by recurrence.

Electrolysis is probably the best means. (Hd.)

Thiosinamine:—10-15 minims of a 10 per cent. solutions hypodermically, have been employed with good results. (Hd.)

Vidal's Method:—Deep parallel incision dividing the vessels, producing obliteration, may have a bene-

ficent effect, if done repeatedly. It usually relieves pain. (B. H.)

Anodyne Applications may be required for the relief of pain.

LARYNGISMUS STRIDULUS.

Raise the child and promptly immerse it in a **Warm Bath**, sponging the throat at the same time with hot water, and apply a **Mustard Sinapism** to the back of the neck. (Bos.)

Anæsthetics will stop an attack immediately; a few drops of **Ether** will generally answer.

Chloroform may be used for the convulsions which may follow. (Jac.)

Ice to the epigastrium or in the rectum sometimes will afford prompt relief.

Cold Water dashed on the face with considerable force may be tried to excite respiration.

Irritation of the Pharynx with the finger or with a feather to induce vomiting will relax the spasm. (Gn.)

Artificial Respiration should be employed when spasm is prolonged and death seems imminent. (Gn.)

Chloral Hydrate:—4–8 grains by rectal injection are recommended for the convulsions which not uncommonly follow an attack. (Jac.)

The child should be placed in a semi-recumbent position, with free access to the air, and the tongue should be watched, lest it fall back into the pharynx and still further impede respiration.

The condition of the gums and bowels should be investigated as possible causes.

LARYNGITIS, ACUTE CATARRHAL.

The temperature of the room should be evenly maintained at about 70° F., and the atmosphere kept moistened with **Steam**.

Heat to the throat increases secretion, and relieves congestion; it is applicable to most cases. Flannel cloths wrung out in hot water and covered with oiled silk are the best methods of application; poultices may be used, but they are heavy and inconvenient. A hot foot bath is often beneficial at the onset of the disease. (Ga.)

Cold Applications by means of the **Ice Bag** or **Cold Wet Cloths**, frequently changed, will often cut short an attack if undertaken early enough (Bos.); they are also often of service in grave forms of the disease attended with swelling of the submucous tissue.

Inhalations of warm medicated vapors are of service.

The following are to be used with boiling water:

Tr. Benzoin Comp., ʒss–i to Oj.

Turpentine, ʒi, poured on the surface of a pail of boiling water.

Thymol, 1–1000, useful in exanthematous forms with purulent exudation.

Oil of Origanum, a few drops to Oj.

Oil of Cubebs, indicated when there is relaxation of the mucus membrane and hypersecretion, 10 drops to ʒi, add a small quantity of magnesia carbonate; of this mixture take 1 drachm to half a pint of water.

Lupulin, grs. v–ʒi strongly recommended if there is great pain and rapid progress of the disease.

Astringent sprays are used by Bosworth as follows:

Liq. Ferri Persulphatis, gtts. v-x- $\bar{z}$ i.

Argent. Nitras, grs. ii-v- $\bar{z}$ i.

Zinci Chloridum, grs. v-x- $\bar{z}$ i.

Dobell's Solution, or some other mild alkaline spray, should be employed for cleansing when there is an excess of mucus.

For the administration of steam inhalations employ one of the special appliances constructed for this purpose, or an ordinary hot water kettle with a piece of rubber piping attached to the nozzle; for want of something better a common tin funnel placed over a cup of hot water will answer.

The following measures, stated in order of their importance, are suggested by Bosworth for hoarseness and complete loss of voice, especially in singers and public speakers, where speedy relief is a matter of importance. There is no definite method, however, by which relief can be obtained in a given period: 1. Absolute and total rest of the voice; this is literal, even whispering is to be avoided as much as possible. 2. Confinement to an apartment the temperature of which should be evenly maintained at 68° or 70°, not higher. 3. Let the atmosphere be impregnated with steam from a spirit lamp. 4. Apply an ice bag to the surface of the throat. 5. By means of an atomizer, spray the larynx with a solution of nitrate of silver, grs. v- $\bar{z}$ i, repeat a second or a third time during the day, the strength of the solution and the interval of application being governed by the appearance of the parts as shown by the laryngoscope. 6. Reduce turbinated bones if swollen by chromic acid. 7. If there is acute inflammation of the pharynx douche the part thoroughly with the post-

nasal syringe and apply nitrate of silver, grs. xxx- $\bar{z}$ i.

(In conjunction with these measures $\frac{1}{500}$ gr. of aconitine hourly for three doses, then every two hours until constitutional effects are produced, and a saline purge.) (Bos.)

LARYNGITIS, CHRONIC CATARRHAL.

Many writers regard this disease as always secondary to some other chronic affection of the upper respiratory tract, as such treatment should also be directed to the primary disease.

Direct instrumental indications require the personal attention of the physician. Inhalations and insufflations may be carried out by the patient or an attendant at home.

Alkaline Sprays tend to increase secretion and facilitate removal of adherent mucus; for this purpose employ the following, each in the proportion of 5 grains to the ounce of water (Solis Cohen): **Ammonium Chloride, Sodium Biborate, Sodium Bicarbonate, Sodium Chloride, Potassium Chlorate; Tar Water** may be used as a menstrum instead of distilled water. A few drops of some aromatic may be added to the solutions to make them more agreeable. (Pp.)

Astringent Sprays are indicated when secretion is excessive. The following are to be employed with one ounce of rose water: **Alum, grs. v., Tannic Acid, grs. ii., Lead Acetat., grs. ii., Ferric Chloride, gr. i., Silver Nitrate, grs. ss., Zinc Acetate, grs. v., Zinc Sulphate or Sulpho-Carbolate, grs. ii.** (Pp.) Bosworth condemns vegetable astringents, iodine, carbolic acid and creosote as ineffectual, and uses the following, to 1

ounce of water, preference of selection being given according to order:

Argenti Nitras, grs. v-xx.

Zinci Sulphas, grs. v-xx

Zinci Chloridum, grs. ii-vi.

Liq. Ferri Persulphatis, Min. x-xxx.

Cupri Sulphas, grs. iii-x.

Steam Inhalations used at home daily are serviceable in cases of hyperæsthesia of the mucous membrane. The patient should remain indoors for half an hour after use. The following are to be employed, all in the proportion of one teaspoonful of the mixture to one pint of hot water:

Tr. Benzoin Comp.,	℥ xxii.
Ol. Pini Silvestris,	℥ ii.

Stimulating and soothing.

Or,

Ol. Pini Silvestris,	
Magnesiae Carb. Levis,	āā ℥ i.
Aq. Destill.,	ad. ℥ iii.

This forms a mildly stimulating and resolving application. The same formula may be employed with the addition of 5 grains of camphor.

Other useful formulæ are as follows:

Ol. Eucalypti.,	℥ i-iii.
Magnesiae Carb. Levis,	grs. xxx-xc.
Aq. Destill.,	ad. ℥ iii.

An agreeable stimulant with sedative effect:

Creosoti,	℥ ss.
Magnesiae Carb. Levis,	℥ iss.
Aq. Destill.,	ad. ℥ iii.

Useful for chronically congested conditions:

Benzol.,	℥ ii.
Ol. Cassiæ,	M vi.
Magnesiae Carb. Levis,	℥ i.
Aq. Destill.,	ad. ℥ iii. (L. B.)

If topical treatment of a more decided character is indicated, solutions applied with a brush or powders should be used, only, however, in the hands of an expert, as spasm of the larynx is liable to be excited by medicinal applications when made for the first time; they should not be employed until tolerance has been established. The use of cocaine will greatly assist in allaying irritation. (L. B.)

Among the stronger local applications which have been suggested for intra-laryngeal treatment are the following:

Iodoform, indicated in ulceration, finely pulverized, alone or with **Bismuth** equal parts, with **Morphine** grs. ii-x to the ʒi of iodoform (Ty.), or in an ethereal solution.

Nitrate of Silver grs. xxv, rose water ʒi , recommended by Solis Cohen in obstinate and protracted cases (Pp.), condemned by Lennox Brown, but regarded by Bosworth as probably the best.

Iodine, gr. i, glycerine ʒi (L. B.), or **Iodine**, grs. v in from 1 drachm to 1 ounce of alcohol; applications are made daily commencing with the weaker solutions; only one puff is to be applied, the patient inspiring. Holding cold water in the mouth may control spasm. The previous use of a strong solution of cocaine will usually act as a preventive. (Gn.)

Chloride of Iron, ʒss- ʒi , with water, ʒi , has been used in the hoarseness of professional singers; a single application, it is said, will often put the parts in good condition. (Al.)

Faradism is of benefit in restoring the tone and power of the voice. (L. B.)

Cold Wet Compresses at night and **Iodine** painted on the throat over the thyroid cartilage are useful adjuncts. (L. B.)

Lactic Acid, Nitrate of Silver or Chromic Acid fused on the end of a silver probe, applied with a properly hooded porte-caustique, may be applied in some cases when there is considerable hypertrophy at the posterior insertion of the chords and anterior face of the commissure, giving rise to watery excrescences. The use of caustics is generally condemned except for the above condition, which is occasionally observed. (Bos.)

LARYNGITIS, ACUTE ŒDEMATOUS.

(Œdema Glottidis)

Such local depletion as can be obtained by **Free Scarification** of the inflamed membrane is the first indication. This can be accomplished by Tobold's concealed lancet or any other laryngeal knife convenient, failing this with an ordinary curved bistoury with the blade wrapped in plaster or thread up to within a quarter of an inch of its point. The scarifications should be used freely three times a day both along the face of the epiglottis and the swollen ventricular cords. (Bos.)

Ice Applications to the neck have been employed with good results; the patient should also be allowed to suck ice.

Cocaine Sprays are advised. (Os.)

Steam Inhalations may relieve. (Bos.)

Tracheotomy should be performed if no relief is obtained. The high rate of mortality, according to Osler, is due to the fact that in many instances the operation is delayed too long.

LARYNX, TUBERCULOSIS OF.

(See Tuberculosis.)

LENTIGO—FRECKLES.

The remedies for chloasma are also applicable.

Copper Oleate:—Grs. v- $\bar{3}$ i, with lanolin or lard is excellent. (Sh.)

Salicylic Acid:—Grs. iv- $\bar{3}$ i, in an ointment. (Sh.)

Hydrarg. Bichlorid.:—Used in strengths varying from one-half to 4 grains to the ounce of water, alcohol or almond oil. These solutions may be left in contact with the skin several hours. (B. H.)

The following are useful combinations:

Hydrarg. Bichlorid.,	grs. iss.
Tr. Benzoini.,	$\bar{3}$ iiss.
Glycerini,	$\bar{3}$ ii.
Aq. Rosæ,	$\bar{3}$ vi. (Sm.)

Or the following paste of Unna, which is to be applied once daily:

Hydrarg. Bichlorid.,	grs. iii.
Zinc. Oxidi,	$\bar{3}$ ii.
Bismuth. Oxychlorat.,	$\bar{3}$ ss.
Dextrini,	
Aq. Destill.,	āā $\bar{3}$ ij.
Glycerini,	$\bar{3}$ iii. (Sh.)

Carbolic Acid:—Touch each spot with the pure acid; as a result, the epidermis will peel off and leave a red spot which will become normal in a few days. (Sh.)

Zinc Sulpho-Carbolate:—A paste for application with a brush may be made as follows:

Zinc. Sulpho-Carbolat.,	grs. v.
Alcohol.,	℥ss.
Collodii,	℥i.

Hardaway recommends:

Hydrarg. Ammon.,	
Bismuth. Subnitrat.,	āā ℥i.
Ung. Aq. Rosæ,	℥j. (Ja.)

LEPROSY.

For ulceration, ordinary antiseptic methods should be employed. Iodoform, Aristol, Salol, Boracic Acid may be dusted on after cleansing with antiseptic solutions. (B. H.)

Oil of Anacardium:—Used in tropical countries, and as a local stimulant may be applied pure, but is better if used at first diluted with 3 parts of almond oil; applications being made to the anæsthetic spots until a blister is formed, also to tubercles until they open; the lesions are then dressed with gurjun oil. (Al.)

Gurjun Oil:—Recommended on good authority; the formula for its use is 1 part of the oil to 3 of lime water; churn well together so as to make a cream and apply to the ulcers. (Vn.) Equal parts of the oil and lime water are also employed. (Al.)

Chaulmoogra Oil:—By inunction pure or with vaseline or lard; spread on cloths and apply to parts. Under this drug improvement may be looked for. (F.)

Ichthyol:—Applications varying from 10-60 per cent. reported by Unna to have given good results.

Mercury Perchloride:—Intra-muscular injections of $\frac{1}{5}$ grain were used in two cases with remarkable im-

provement (T. 97.); it is believed to be a valuable agent.

Serum Treatment:—Claims have been made for the treatment of de Dios Carrasquilla, but its curative power has not yet been demonstrated. (F.)

Chrysarobin:—Recommended by Unna in the following combinations, to be rubbed into all the lesions except those of the hands or face: Chrysarobin and ichthyol of each 5 parts, acid salicylic 2 parts, simple ointment 100 parts; on the hands and face **Pyrogallic Acid** is substituted for the chrysarobin; (to counteract bad effects of the drug 30 drops of dilute hydrochloric acid are administered daily, for women and children); **Resorcin** is sometimes substituted for chrysarobin.

Electro-Cauterization:—Has been used as a means of reducing leprous nodules; each tubercle should be cauterized internally by single or multiple points or by electro-caustic bars when the surfaces to be destroyed are large. (T. 98.)

Excision:—Followed by the application of pure **Carbolic Acid**, is a method which has been employed with a view of relieving the disfigurements; **Tannin** is applied to the surface after the carbolic acid in order to form a crust and to protect the action of the acid. The knife or scissors are used for excising. (B. M. J., 6, 9, 88.)

LEUCORRHŒA.

(Compare Endocervicitis and Endometritis.)

Being a symptom, treatment is obviously to be directed toward the cause; when of cervical origin, it is

that of endocervicitis, endometritis and erosion. Displacements, hypertrophied cervix, lacerations, polypi, cysts and vaginitis, dyscrasia, ascarides in children are also causes.

Douches:—Hot water douches are of great value in all forms and should be used daily; tepid salt water is beneficial for simple forms of catarrh. (Cp.)

Hydrastis:—One of the most useful remedies. The following are recommended for injection:

Fld. Ext. Hydrastis,	ʒi.
Aq. Destill.,	Oss.

Or,

Fld. Ext. Hydrastis,	
Suc. Calendulæ,	āā ʒi.
Glycerini,	ʒvi.

Tablespoonful to half a pint of water. (Cp.)

Creolini,	gtts. xxx.
Fld. Ext. Hydrastis,	ʒiiss.

Two tablespoonfuls to half a pint of water. (T. 97.)

Borax:—5–10 per cent. solutions, often very satisfactory in alkaline discharges. (F.)

Boracic Acid:—The powder by insufflation or in solution with glycerine tampons; also used in solution for injection of 6 drachms to the pint. (R.)

Tannin:—Used in several ways; half an ounce with half a pint of claret wine forms a good astringent injection. Also the following: Creosote 3 parts, tannic acid 6 parts, alcohol 3 parts, water 24 parts. A tablespoonful of this mixture with two pints of water; inject two or three times a day. (T. 98.)

Alum:—A very useful and inexpensive remedy; use about 1 drachm to a pint of water for a simple injection.

The following combination is also recommended:

336 DIGEST OF EXTERNAL THERAPEUTICS.

Alum,	℥i.	
Zinc. Sulph.,	℥ss.	
Sod. Biborat.,	grs. iv.	
Aq. Rosæ,	ad ℥viii.	(R.)

Or,

Alumen.	
Zinc. Sulph.,	āā ℥i.
Potass. Permang.,	
Heliotropin,	āā gr. i.

Dissolve this powder in a pint of warm water and use as a vaginal douche. (T. 97.)

Myrrh:—1 drachm, to an ounce of water often will have an excellent effect in simple catarrhal conditions. (Al.)

Zinc Sozoiodate:—As a dusting powder or as a 10 per cent. ointment on tampons. (Al.)

Grindelia:—An effective remedy, may be combined with creolin as follows:

Fld. Ext. Grindeliæ,	℥ss.	
Creolini,	℥ii.	
Aq. Destill.,	q. s. ad ℥v.	(Sm.)

Loretin:—By insufflation, after a cleansing douche this drug has many of the advantages of iodoform without its odor; it is especially serviceable in purulent and offensive discharges. (T. 96.)

In some chronic cases, benefit is derived from tampons soaked in **Glycerine of Carbolic Acid** 1 part and **Glycerine of Tannin** 4 parts, introduced through a speculum. (T. 96.)

Glycerite of Tannic Acid or **Gallic Acid** are also used for saturating tampons. (Sw.)

Effective injections, viz:

Acid. Salicylic,	
Acid. Thymic.,	āā ℥ss.
Ess. Amber.,	gtts. xx.
Alcohol 90°,	℥viss.
Cogn.,	℥iss.
Aq. Destill.,	℥ix.

Tablespoonful to a quart of water; inject three or four times daily. Useful for the suppression of fetor. (Sn.)

Zinc. Sulphat.,

Alum. Sulphat.

āā ʒiss.

Glycerini,

ʒ vi.

Tablespoonful to a quart of hot water for injection. (Sn.)

The following suppository may occasionally be of service:

Pulv. Catechu,

Aluminis,

āā ʒi.

Ol. Theobromat.,

q. s.

Ft. Suppos., No. vi.

One night and morning. (Sn.)

The following douches are to be employed for antiseptis:

Hydrarg. Bichlorid., 1-4000-2000, for occasional use.

Carbolic Acid, 1-100 or 1-200.

Izal, ʒi-Oj.

Condy's Fluid, Sulpho-Carbolate of Soda, Creolin, Lysol each in the proportion of 1-200.

Liq. Sod. Chlorinatæ, ʒi-Oj.

Potass. Permang., grs. xx-Oj water; inject a small quantity three times a day as a deodorant when discharge is very offensive. (Alb.)

When sedative douches are desired, the following may be employed:

Liq. Plumbi Subacetat., ʒii-Oij.

Liq. Opii. Sed., ʒi-Oj.

Chloral. Hydrat., grs. xx-Oj.

Sod. Biborat. or Sod. Bicarbonat., ʒiii-Oj. (Alb.)

LICHEN RUBER.

Simple ointments, such as Cold Cream or Vaseline, when there is no itching.

Tar Ointments in various forms are indicated, but must be used with discretion, as they do not always agree. An ointment containing 1–2 drachms to the ounce of Oil of Cadi, pure or diluted, with an equal quantity of olive oil or cosmoline, is beneficial. (B. H.)

Liq. Carbonis Detergens:—Preferred by Crocker as a lotion in the strength of 10 minims to 1 drachm to the ounce of water.

Liq. Picis Alkalinus, made in the following manner, is used:

Potass. Caustic,	grs. xv.
Picis Liquidæ,	grs. xxx.
Aquæ,	℥iv.

This should be considerably diluted when first used, as it is irritating. (Vn.)

Naphthol or Thymol:—Grs. x–℥ii, with vaseline ℥i, recommended by Crocker; useful for the itching.

Unna keeps the patient in bed between blankets, and has him rubbed night and morning with this ointment:

Ung. Zinc. Ox. Benzoat,	℥iv.
Acid. Carbolicæ,	℥iv.
Hydrarg. Bichlorid.,	grs. ii–iv. (Ja.)

In chronic cases Hardaway uses the following, well rubbed in with flannel:

Sapo. Olivæ Præp.,	℥iv.
Ol. Rusci,	
Glycerini,	āā ℥i.
Ol. Rosamarini,	℥iss.
Alcohol.,	ad. ℥viii.

Hot compresses once or twice daily will often relieve severe cases; emollient and alkaline baths are useful in cases where the skin is very irritable.

The following was recommended by Unna:

Hydrarg. Chlorid. Corros.,	grs. vii.
Cretæ Præp.,	ʒ iiss.
Acid. Carbolicæ,	
Ol. Olivæ,	āā ʒ v.
Ung. Zinc. Oxidi,	ʒ xv.
Rub in thoroughly.	(Sn.)

Salicylic Acid:—Grs. x-xx to alcohol and water ʒi, or in an ointment grs. x-xv-ʒi; a 10-20 per cent. plaster is effective in thickened verrucous patches. (B. H.)

Menthol:—Indicated especially when itching is a prominent symptom; use in an ointment, grs. x-xv-ʒi. (B. H.)

In addition to the above, the more stimulating and stronger antipruritic remedies which have been mentioned for eczema may be employed for this affection, with the view of relieving the pruritus and causing absorption of the lesions.

LOCOMOTOR ATAXIA.

Fränkel's Exercise Treatment:—This method, it is claimed, is exceedingly helpful in keeping patients on their feet for years, and benefiting those who have not walked for a long period to such a degree that the powers of locomotion are restored sufficiently for the patient to walk about. There are two classes of exercises, those performed in bed and those performed out. The bed exercises consist of flexion, extension,

abduction, and adduction of each leg separately, then both simultaneously. The knees and hips are likewise exercised. The patient is asked to place the heel of one foot upon the big toe of the other, then place the heel upon the knee of the other leg, then slowly travel upon the ridge of the tibia to the ankle. These exercises are made alternately, first with one leg then with the other, with the eyes open and then with the eyes closed, and should be attempted over and over again, morning and afternoon, for half an hour at a time with frequent rests; the patient should be encouraged to persist until he succeeds.

The exercises performed out of bed are as follows:

1. Place the patient with back to a chair, heels together; let him seat himself slowly in the chair, then let him rise in the same careful manner. No cane is used; if he cannot stand attendants on each side must support him.

2. Let one leg be placed at a walking step in front of the other, then place back into the original position with great exactness. Repeat the same with the other leg. Patient may support himself if necessary.

3. Walk three paces slowly and with precision.

4. Rest in standing position with one foot before the other with arms akimbo; flex the knees then slowly rise.

5. Patient exercises as in No. 2; advances one foot, then return it slowly to original position, then walks one step behind the other. This is very difficult, as it requires a great deal of balancing power.

6. Walk twenty steps, as in No. 3.

7. No. 2 performed with a cane.

8. Stand with a cane with feet together and hands on hips.

9. Stand without cane, feet separated, and make various movements with the arms, grasping objects or forcing back outstretched hand of attendant.

10. Maintain same position as in No. 9; then flex the trunk forward and back, right and left.

11. No. 9, with feet together.

12. No. 10, with feet together.

13. Walk along a parallel line in the floor, patient supporting himself with a cane.

14. Same as No. 13, without a cane.

Exercises with fingers and arms are recommended, based on the same principles. (Gld.)

Sodium Phosphate:—A hypodermic injection of a 0.1 per cent. solution has recently been used for the relief of the darting pains, which it is claimed to have considerably diminished. (T. 98.)

Theine:—Has proved serviceable in relieving the pains, large doses hypodermically; as much as 3 grains are said to have been given. (F.)

Electricity—In the treatment of this affection this is an agent in reference to which there is a marked divergence of opinion. It is condemned by some and praised by others; in Germany it is much used, but does not appear to be so extensively endorsed in this country. It is claimed that if used early enough electricity is capable of arresting the morbid process, but if cases are not properly selected it will do harm. (Ht.)

Erb's combined galvanism of the spinal cord and sympathetic cervical ganglion constitutes the best central application. The negative pole is placed over the superior cervical ganglion on one side, while the positive is applied to the lumbar region of the spine on the opposite side of the spinous processes. A current of 6 to 8 milliampères is passed for one

minute and a half. Then the electrodes are changed to the opposite sides, that is, the negative electrode is placed where the positive was applied and the positive to where the negative had been. The current is again allowed to pass through the parts one minute and a half. The negative electrode is now placed over the spinous processes of the cervical vertebræ and the positive over those of the lumbar. After this the limbs and trunk are treated thoroughly with the faradic brush, with a current as strong as can be borne without inconvenience. Applications may be made on alternate days. (Gn.)

Static Electricity is also employed with great relief in some cases. (F.)

Hydrotherapy:—Is a serviceable measure if used judiciously. Tepid baths (80° – 90°) combined with gentle rubbing are beneficial. Hot and wet packs and vapor baths are used, but are claimed by some authorities to be harmful. Wet compresses on the legs at night will sometimes relieve pain. (Ty.)

Among the natural springs which enjoy an especial reputation for treatment of this disease are Oeynhausien-Rehme in Minden, and Aix-la-Chapelle and Nauheim. The mud and iron baths of Pyrmont, Driburg, Elster, Carlsbad, and Franzenbad are mentioned in this connection.

Massage:—Both by its general effect upon the nutrition and circulation, may from time to time be employed with benefit. Disturbances of sensibility often improve under this treatment. (F.)

Bonuzzi's Treatment:—This is described by P. J. Möbuis, of Leipsic, as "actually barbarous." It consists in drawing the feet of the patient, by means of a cloth, so far above his head that the knees approach

the forehead. Blondell's modification of this treatment consists in an extension *en miniature*, approximating the patient's bended knees to his chin, and holding them in that position for a few moments by means of a bandage passing behind the knees and about the neck. (T. C., Vol. XI.)

Suspension:—By means of Sayre's apparatus, first tried by Motschutkowsky, of Odessa, was much in vogue at one time, but this procedure is attended with some danger, especially in heavy patients, and those with arterio-sclerosis. Its results have not proved as satisfactory as they promised, and like many other "cures" it has fallen into disuse. (T. C., Vol. XI.)

Mercurial Inunctions:—Advised in syphilitic cases and those in which there is a suspicion of specific taint; 3-4 grains of blue ointment daily may be rubbed in, and a bath should be taken on the seventh day; this procedure may be repeated four or five times. The gums should be watched carefully. After an interval of five or six weeks or several months a second course may be administered. The baths of Nauheim and Rehme are advised by Erb during the interval of inunctions. (T. C., Vol. XI.)

LUPUS ERYTHEMATOSUS.

While in external treatment we look for positive effect, it should be remembered that the disease sometimes disappears spontaneously, with little or no scarring; therefore, applications which have a tendency to disfigure should be avoided. (Pp.)

Sapo Viridis:—This remedy has been recommended

by Hebra and Kaposi, and is at times very useful; it may be used pure or diluted in the proportion of two parts with one of alcohol (spts. sapo. kal.); this is to be rubbed in energetically once or twice daily. The sapo viridis plaster may be used when a more active method is desired. After several days the soap is to be discontinued and a soothing ointment applied. The spts. sapo. kal. may also be employed with advantage to cleanse the parts preparatory to the application of other remedial agents. (Pp.)

Carbolic Acid:—Applied pure, forms one of the best applications. (Kp.)

Ichthyol:—Useful in the following formula suggested by Unna :

Ichthyoli,	℥iv.
Amyli,	℥iv.
Sol. Albumin. Concentrat.,	M. v-viii.
Aquæ,	ad. ℥i.

This preparation dries quickly, and a new coat may be added.

Hydrarg. Ox. Rubr.:—An ointment known as “Rochard’s,” composed of 4 grains of iodide melted with 10 of calomel, until combination takes place, then rubbed up with an ounce of lard; it is stimulating and almost caustic, and is occasionally used on small chronic patches. (Al.)

Glacial Acetic Acid:—A mixture of equal parts with glycerine has been found serviceable in small patches and seemed to stimulate absorption of deposits. (Pp.)

Zinc Nitrate—In severe and chronic cases the following was recommended by Tilbury Fox :

Zinc Nitrate,	℥iss.
Distilled Water,	
Glycerite of Starch,	
Flour.	āā ℥i.

Make into a paste and apply; when paste is withdrawn, apply poultice; the raw surface left by removal of eschar should be dusted with Diachylon or Zinc Oxide Ointment. Reapplication may be needed. (F.)

Pyrogallic Acid:—Is serviceable when strong remedies are necessary; being somewhat caustic in action it must be watched; may be employed 40-90 grains to the ounce as an ointment; weaker applications should be tried first. It is safer and more satisfactory when applied in flexible collodion, as follows:

Acid. Pyrogallic.,	℥i.
Liq. Guttæ Perchæ,	℥iv.

Apply with a brush on patches several times until considerable reaction takes place or a crust forms, then discontinue. As soon as the crust is removed, repeat the application; if there is much scaling, 30 grains of Salicylic Acid may be added. (Pp.)

Naphthol Sulphur Soap—Excellent for cleansing. (Kap.)

The following lotion is recommended when inflammatory symptoms are marked, and in recent and superficial forms with little infiltration and no involvement of the sebaceous glands:

Zinc. Sulphatis,	
Potassii Sulphid.,	āā ℥ss.
Aquæ,	℥iii.
Alcoholis,	℥i.

The salts should be dissolved separately in water, and the lotion added. The parts are to be mopped twice daily for 15 to 30 minutes; if too strong, dilute. (Pp.)

A stronger application, suitable for cases mentioned in the preceding paragraph, as well as when there is more infiltration, is as follows:

Chrysarobin,	℥iss.	
Acid. Salicylici,		
Pulv. Caldmīnæ,	āā ℥ss.	
Ætheris,	℥i.	
Collodii, Flex.,	℥v.	(Vn.)

Pyoktanin:—Daily application of a saturated solution, is of great value in torpid cases.

Naphthol and Sulphur pastes promoting desquamation are also useful in the same condition. (T. 98.)

Chrysarobin:—40–90 grains to the ounce, as an ointment in the same condition as mentioned for pyrogalllic acid; dangerous for use about the face, as it may cause a violent conjunctivitis. (Pp.)

Caustics:—These are sometimes demanded, but weaker applications should always be tried first.

Caustic Potash:—1 part to 3–6 water, applied by means of a Charpie brush on a stick, forms one of the best caustics. (Vn.)

Linear Scarification:—Used in cases which are extensive and much infiltrated; better than caustics and strong applications. Use a fine scalpel or tenotome or multiple scarifier, holding it in the hand like a pen. Make a series of parallel incisions, about one-sixteenth of an inch apart, and extending entirely through the skin; having covered the part with these parallel incisions, make another series at right angles, and even a third obliquely may be made; successive patches of an inch square may be operated upon daily. The wounds may be dressed with an antiseptic powder, such as aristol or euophen. Little scar is left, and the result is more satisfactory than any other method of treatment. The skin must be frozen by ether or salt and ice before operation. (Cr.)

Erasion by Curette and Scraping Spoon has been used in severe cases, but scarification is better.

Paquelin Cautery:—Heat barely red and run over the surface very superficially, then dress with iodoform which forms a crust. After about ten days this falls off leaving a smooth pale surface. (Vn.)

Electrolysis:—Multiple puncture will sometimes give brilliant results. Most cases will require active stimulating treatment, yet there are cases where the pain and inflammation will demand for a time soothing applications. (Ja.)

Tr. Iodine:—Alone or with equal parts of glycerine, painted on once or twice daily until a coating forms, is sometimes used, or it may be applied as follows:

Iodi,		
Potassa Iodidi,	āā	ʒiv.
Glycerini,	ʒi.	(Pp.)

Ol. Cadi:—With alcohol and green soap, equal parts; rub in night and morning. (Pp.)

Oleate of Mercury:—10–25 per cent. ointment rubbed in daily is of value. (Pp.)

Plasters of **Resorcin**, **Ichthyol**, **Hydronaphthol** and **Mercury** are effective; the latter is especially recommended by Kaposi.

LUPUS VULGARIS.

(Tuberculosis Cutis.)

External measures are absolutely essential in early cases. In the early stages stimulating applications used with a view of causing absorption are unsuccessful, and severer methods will have to be employed. Mild applications, such as oils, ointments and plasters, namely, olive oil, soft soap, simple ointment, salicylic and mercurial plaster, will often form useful adjuvants in reducing swelling and inflammation, macerating crusts and promoting the formation of smooth cicatrices.

Local treatment is either by operative procedures or by the application of caustics.

Erasion by Volkmann's spoon is the foremost surgical method, though not complete, inasmuch as small nodules may be left, which must be removed by other means. It is well adapted to large confluent nodules, with flabby base and depressed infiltrated tissue. (Kap.)

Curettage:—The whole patch or patches may be scraped with the dermal curette, then **Pyrogallic Ointment**, 25-30 per cent., should be applied for ten days, and that in turn followed by **Mercurial Plaster**. The acid will cause free suppuration and destroy the cells left by the curette. A second or third application may be necessary. Individual nodules may be bored out with Morris's double screw instrument, or with Fox's dental burrs and hook, then pure **Carbolic Acid** is applied to the little excavation thus produced. (Ja.)

Galvano-Cautery:—Has the disadvantage of burning healthy as well as diseased tissue; it is, however, serviceable in destroying recurrent nodules and those situated on the mucous membranes. (B. H.) It is preferred by some dermatologists for application after curettage.

Linear Scarification:—Another valuable measure and effective in non-ulcerative forms. The parts are thoroughly cross-tracked, according to Vidal's method; if bleeding is profuse cold or hot compresses should be applied. A five-bladed lancet, constructed for the purpose, may be used for making the incisions. After scarification a caustic is applied, followed by antiseptic dressings. The operation may have to be repeated.

Besnier's Method:—Employed with advantage. This consists in the use of electro-cautery knives of various shapes and sizes, employed with a view of reaching all varieties of deposits. (Vn.)

Multiple Punctate Scarification:—Also advised. Veiel's instrument or Pick's multiple scarificator may be used. The knives before use may be dipped in iodine, carbolic, or some other antiseptic. This procedure is of service especially for hypertrophic conditions; also for the hypertrophic scars which sometimes results from erosion. (B. H.)

The scars which follow the use of the curette, and linear and punctate scarification are usually less marked than those which result from the cauteries. (Pp.)

Excision and Grafting, After Thiersch's Method:—Excision is available for patches of any size. Both the lupoid patch and the part from which the grafts are to be cut (preferably the thigh) should be thoroughly disinfected with soap and water, ether and carbolic acid the day before operation, and a pack of gauze soaked in a solution of carbolic acid 1–20 should be kept on the surface until the operation. The following points may be mentioned:

1. The parts are thoroughly cleansed and every precaution subsequently taken by the operator to prevent infection by the knife.

2. Before operating a line of incision is marked out beyond the disease by means of sterilized aniline dye.

3. Hæmorrhage is carefully arrested before grafts are applied.

4. Dress the surface with simple layers of dry sterile gauze fastened with collodion, and allow the dressing to remain four or five days; second dressing

should be applied similar to the first, then a dermatol or iodoform ointment.

5. Certain cases are unsuitable by reason of implication of the nasal cavity, multiplicity of areas, or the extent of the disease. Two or three sittings, at intervals, may be employed with extensive cases. (T. 98.)

Though surgical procedures have largely superseded the use of caustics, the latter are none the less of service; yet it must be remembered that certain of these agents, namely, Vienna paste, zinc chloride, the pure stick, or Conquin's paste; lactic acid, and salicylic acid produce most unsightly scars. (B. H.)

Caustic Potash:—When thorough and extensive destruction of tissue is desired a stick wrapped in a cloth with the point protruding, should be forced down into the diseased foci; the effect of the caustic goes beyond the point touched; dilute vinegar should be kept near at hand to check and neutralize its action and relieve the severe pain. (Vn.)

Nitrate of Silver:—Is effective in some cases, and as it leaves no scars may be selected to use on the face; its action, however, is superficial. Papules and tubercles may be destroyed by boring with the solid stick, and patches may be mopped with a saturated solution. (Ck.)

Liq. Antimonii Chlorati:—Regarded by Unna as superior to any other remedy. He employs it in two forms, and recommended the addition of salicylic acid, creosote, and cannabis Indica.

For ordinary cases:

Acid. Salicylici,	grs. xv.
Liq. Antimonii Chlorati,	gtts. xv.
Ext. Cannabis Ind.,	grs. xv.
Creosoti Fagi,	grs. xxx.
Vaselini,	ʒi grs. xv.
Adipis Lanæ,	ʒiiss.

This is applied to all the nodules with a glass rod, and the whole lupus region is covered with a Zinc Oxide Plaster. The covering intensifies the action of the ointment by its impermeable covering, and protects the surrounding parts.

In older cases, with scattered nodules and deep forms of the disease, a stronger ointment may be used, viz :

Acid. Salicylici,	
Liq. Antimonii Chlorat.,	
Ext. Cannabis Ind.,	
Creosoti Fagi,	āā grs. xxx.
Vaselini,	grs. xxx.
Adipis Lanæ,	ʒiiss.

The dressings are changed every day or every second day, according to the amount of suppuration. After some weeks of this treatment the nodules ulcerate and then begin to heal over, often without further treatment; a smooth surface is left. In obstinate cases, when the dressing is changed, the Liquor Antimonii Chlorati may be applied to doubtful spots. Cocaine may be previously applied. (T. 97.)

Salicylic Acid and Creosote:—1 part of the acid with 2 parts of creosote, made into a plaster, was regarded by Unna as the best superficial caustic, until his adoption of the preparation of chloride of antimony as above. (T. 97.)

Hydrarg. Bichlorid.:—Unna recommends the following:

Hydrarg. Bichlorid.,	grs. iii.
Acid. Carbolic,	grs. xii.
Alcohol,	ʒi.

A small sharpened stick is dipped into this solution and bored into each little lupus deposit; The pain does not last long.

Pyrogallic Acid:—Is one of the best remedies; an ointment of ʒi-ʒi of vaseline, spread on cloth and renewed twice daily, is painless and efficient in many instances; it appears to select the diseased tissues and acts but little on the healthy. (N.)

A combination with **Aristol** is used, viz:

Pyrogalol,	grs. ix.
Aristol,	grs. xviii.
Lanolin,	
Vaseline,	āā 3 ss. (T. 97.)

Zinc Chlorid.:—According to the following formula:

Zinc. Chlorid.,	
Antimonii Terchlorid.,	āā 3 ij.
Acid. Hydrochloric.,	q. s.

Enough acid is added to dissolve the Zinc, and the mixture is rubbed up in a mortar with enough Powdered Licorice to make a paste. This forms a powerful caustic, but it is very painful and eats through both healthy and diseased tissues. (Vn.)

(For other caustic preparations of this remedy see Epithelioma.)

Ethylate of Sodium:—Applied on glass rods; the part should be first dried as far as possible, and no water allowed to touch it while the application is being made. This agent is less painful than other caustics, and may be preferred in lesser operations when an anæsthetic is not used. (N.)

Cosme's Paste:—As modified by Hebra is as follows:

Acid. Arseniosi,	Ḑi.
Hydrarg. Sulphuret. Rubr.,	3 i.
Ung. Simplicis,	3 i.

Spread on lint or linen and apply firmly; leave it on for two or three days; poultices are then applied until the slough comes away; then mild stimulating ointments. This method is satisfactory but very painful.

Lactic Acid:—Has given beneficial results; the pure acid is made into a paste with salicylic acid; the lint saturated with the remedy or covered with a thin layer of the paste should be applied; the surrounding

healthy tissue must be protected by gutta percha solution. After twenty-four hours remove and dust with antiseptic gauze. (Al.)

At Unna's clinic, pointed matches are soaked in the following solution:

Sublimate,	1 part.
Salicylic Acid,	10 parts.
Ether,	25 parts.
Olive Oil,	100 parts.

These are bored into each individual nodule, the ends cut off with scissors and left *in situ*; then covered with Mercury Carbolic plaster; after twenty-four hours this is removed, the part washed and the holes filled with the following powder:

Sublimate,	grs. iss.
Cocaine,	grs. viii.
Salicylic Acid,	grs. viii.
Mag. Carb.,	ʒ iiss. (T. 96.)

(For other caustic applications see Epithelioma.)

Aristol:—Has been found effective after curettage.

Ethyl-Diamine Cresol:—Has been favorably mentioned; it is a colorless, nearly non-toxic liquid, with remarkable penetrating power, and a stronger disinfectant than cresol. Solution of 1–5000–3000 on compresses have been found healing in lupus of the face. Continuous baths have been used for the disease on the limbs. (T. 98.)

Guaiacol and Thymol:—Have been successful subcutaneously. Injections of fifteen minims of the following twice a week:

Thymol,	gr. xxx.
Guaicol (Sterilized),	
Olive Oil,	āā ʒ i gtt̄s. xv.

Great caution is necessary, as severe pulmonary congestion is apt to occur. (T. 96.)

Salicylic Acid:—In addition to combination with

other remedies as already mentioned, is used in other forms; a 10–20 per cent. plaster, changed once or twice a day; a saturated solution in collodion, said to be efficacious after cleansing the parts with an alkaline solution, or an ointment $\text{zi-ii-}\text{zi}$ as a mild and slow acting remedy.

Picric Acid:—Thoroughly dusted on the parts, followed in a few days by 1–20 per cent. ointment, constitutes another method which has been reported successful. (T. 96.)

Mono-Chlorophenol:—20 per cent. solution in alcohol rubbed in rather hard with a pad of wadding every two days for several months has been tried with encouraging results. (T. 98.)

Injectations of Calomel and of Camphorated Naphthol have also been recently employed. (T. 98.)

Meragliano's Serum:—Two cases have been reported as successfully treated; doses of 16 and 80 minims alternately, the part being painted with the serum. (T. 97.)

Tuberculin:—Hopes that have been raised in regard to the use of this remedy have been proved to lack foundation, as the disease was found to recur after the injections had been discontinued and in some cases with increased virulence.

Koch, after nearly five years silence, has announced three new modifications of tuberculin, including that of tuberculin R. with immunizing and curative properties, which has led to marked improvement, by injection, in lupus vulgaris. Koch's directions were to commence with a small dose (one five-hundredths of a milligramme) which is raised as rapidly as possible, caution being exercised not to excite constitutional reaction and not to administer a second dose

until the temperature has fallen to normal or nearly so. "The cure is completed when a twenty milligramme dose is reached."

The remedy has been employed by Maragliano, Busenius, Wörner, Sceligmann, Malcolm, Morris, Whitfield, Lassar, Doutrelepont, and Van Horn with generally favorable results, but judging from the reports there were no decided cures. Doutrelepont recommends that the dose be increased more slowly than suggested by Koch. In brief, it may be said that the use of tuberculin for tuberculosis of the skin has scarcely yet gone beyond the stage of experimentation. The preparations, too, are not of uniform strength and may sometimes cause unfavorable symptoms. The difficulty of obtaining it and the price are additional drawbacks to its practical use.

LUMBAGO.

(See Muscular Rheumatism.)

MALIGNANT PUSTULE (ANTHRAX.)

As soon as recognized thoroughly, Excise and Cauterize the raw, exposed surface with the Galvano-Cautery, pure Carbolic Acid, Nitric Acid, or Caustic Potash; applications like Iodine, etc., are absolutely useless. (Gn.)

Carbolic Acid:—Subcutaneous injections several times daily of a solution (about 2 per cent.), a little distance from the seat of the lesion has proved effective in preventing the brawny œdema. To prevent

extension, the neighboring parts may be bathed with a 10 per cent. solution in oil of glycerine. (An.)

After removal of foci by the actual cautery, inject hydrogen peroxide and apply compresses of carbolic acid solution 1-50. (Sj.)

Injections of a solution of one part of carbolic acid to five of glycerine are also advised, administering 20-30 minims around the sloughing tissues, but not into the same; the needle should be introduced about one inch, and withdrawn slowly while pressing out the solution; the surface should then be dressed with carbolic fomentations 1-40, which should be continued until the slough separates. (Sj.)

Iodine Injection:—A 10 per cent. solution or the pure iodine are recommended in conjunction with the thermo-cautery. (T. 98.)

Deep Crucial Incisions:—Followed by the application to the bottom of the incisions of **Carbolic Acid** 1-20, or **Bichloride of Mercury** 4-15 per cent. mixed with calomel, constitute another method; as the solution dissolves, it deepens the cauterization. (Ty.)

MEASLES.

Sponging:—For hyperpyrexia, sponging with water at 90°-95° may be employed, or if this is ineffectual a temperature of 80° may be advantageously substituted. As a last resort cold water baths may be employed. (Strr.)

Cold Baths and Cold Pack:—When there is high temperature with nervous symptoms nothing is so reliable. The temperature of the bath should be at first 100°, then gradually lowered to 85° or 80°; the

body should be rubbed briskly while in the bath, and water applied to the head. After removal, dry quickly and wrap the patient in a blanket. The bath should last from five to twenty minutes. The cold pack may be applied as follows: Strip the patient and envelope him in a sheet which has been wrung out in water at the temperature of 100° ; upon the outside of the sheet rub on ice over the entire trunk, first anteriorly then posteriorly, continue this for five minutes or more, according to indications; afterwards roll the patient in a blanket without the removal of the pack. The head should be sponged with cold water, and hot baths if necessary should be applied it to the feet. (Hlt.)

Hot Baths:—These are indicated when there is high temperature, feeble pulse and cyanosis, conditions which contra-indicate cold baths or cold packs. Mustard may be added, ice should be applied to the head during the bath. (Hlt.)

Hot Mustard Baths:—At a temperature of 100° , half an ounce of mustard to the gallon, are indicated in malignant types, the patient should be immersed up to the neck for about three minutes, removed quickly, dried and placed between blankets, or wrapped in blankets and dried later. Then baths may be administered every two hours. (Strr.)

Hot Pack:—With hot water or mustard water, 2 drachms to the gallon, may be used with the same indications mentioned for hot baths. They may be renewed every half hour. (Strr.)

Simple washes of **Borax**, grs. x- $\bar{z}$ i, or **Hot Water** may sometimes be necessary for the eyes, and **Dobell's Solution** for cleansing the throat. (Strr.)

The discovery of the presence of pneumococci

in the buccal secretions during the course of the disease would seem to point to disinfection of the mouth. (Hlt.)

MENINGITIS, ACUTE CEREBRAL.

(Lepto-Meningitis.)

Extreme quiet and avoidance of all disturbing influences is of the utmost importance; a darkened room is advisable.

Ice Bag:—Should be kept on the head, and **Leeches** may be applied with benefit to the back of the neck and temples. (Ty.)

Blisters:—Applied to the back of the neck are useful, and it is claimed not as painful as appearances would indicate. (St.)

Mercurial Inunctions:—Are recommended when the disease is non-tubercular. (Ty.)

Cold Sponging:—Useful to relieve fever. (An.)

Surgical Interference should be resorted to promptly when there is disease of the middle ear.

MENINGITIS, CEREBRO-SPINAL.

Hot Baths:—Have been used successfully; the patient receiving twelve baths at a temperature of 104° in three days. (Sj.) Warm baths are highly beneficial in lessening the tendency to spasms.

Aspiration of Cerebro-Spinal Fluid:—In many cases a favorable course has been ascribed to puncture. A simple Dieulafoy needle may be used, or a

Pavaz syringe; puncture is made between the laminae of the lumbar vertebrae a little to one side of the median line. (Sj.)

Cold:—Is generally advised; baths are both grateful and valuable; ice bag to the head and long ice bag to the spine. (Bt.)

Chloral Hydrate:—In 1 drachm doses by the rectum should be administered to an adult for the convulsions. No other remedy, says Tyson, equals it.

Chloroform or Ether:—Inhalations may be indicated in desperate cases. (Ty.)

Morphine:—Hypodermically affords relief to the intense headache, myalgia, muscular contraction and tones the heart. (An.)

MENORRHAGIA AND METRORRHAGIA.

As a rule, external treatment is unnecessary for menorrhagia, but when internal remedies alone have failed, they should be supplemented by these measures. In such cases an examination should be made without delay.

Rests is an important factor and should always constitute part of the treatment. (D.)

Cold:—Cloths wrung out in cold water, or better, ice bags to the hypogastrium, or small rectal injections of quite cold water. (K. C.) Cold sitz bath with the feet in hot water. (Rd.)

Heat:—A hot water bag applied at the junction of the dorsal and lumbar regions reduces congestion, and controls metrorrhagia and menorrhagia. (F.)

Vaginal douches of water at a temperature of 125°–135° may be used in bad cases. (K. C.)

Hydrastine:—Is indicated for hæmorrhage due to metritis, endometritis, myomata, or incomplete involution; a 10 per cent. solution, hypodermically, acts favorably. (K. C.)

Astringent Injections:—Small injections of this nature are useful, such as **Alum**, ʒss–Oij., or a solution of **Tannin**; the latter is liable to stain the clothing. (D.)

Tepid Hip Baths:—Are advised by Baruch, who claims they are superior to any internal medicine. The patient is to be placed in a hip bath at a temperature of 85°, in which she is to remain from five to eight minutes; constant friction is to be applied, followed by affusion, or preferably the circular baths; this douche at a lower temperature. (S. B.)

Puncture of Cervix:—Followed by the application of tampons of boroglyceride is sometimes effective in cases of chronic congestion. (Alb.)

Antipyrin and Salol:—Equal parts heated in a test tube; a brown liquid is obtained which may be applied with absorbent cotton to the whole endometrium; it is said to be painless and productive of excellent results. (Sj.)

Cotarnine Hydrochlorate (Stypticin):—Is a very useful remedy; when hæmorrhage is very profuse inject 30 drops of a sterilized solution into the gluteal muscles. (Sj.) This drug is said to be superior to ergot or hydrastis, and is indicated when there is subinvolution, fungus, endometritis, hæmorrhage from fibroids, and at the climacteric.

Conium:—Suppositories of 2–4 grains with glycerine 1 part, gelatin 4 parts, introduced twice daily,

form an excellent anodyne when the condition is associated with ovarian disease. (F.)

Salicylic Acid:—In cases not dependent upon some gross lesion, tampons moistened with a solution are valuable. (F.)

Hot Saline Enemata:—Used with much benefit when the patient is faint from the loss of blood; it will also tend to stop the flow. (D.)

Tamponing:—When hæmorrhage is severe, or in cases when it is not practical to see the patient often, use hot douches, then pack the vagina with tampons, allowing them to remain twenty-four hours; those in contact with the cervix may be saturated with glycerite of alum. If this measure fails, the cervix must be dilated, and the whole uterine cavity packed. (K. C.)

MILIARIA (PRICKLY HEAT.)

Cold Baths or Sponging frequently in warm weather, light, loose clothing and light bed clothing. (Bt.)

Soothing and Astringent Lotion, as mentioned under acute eczema, may be employed.

Mild and Astringent powders as Zinc Oxide, Bismuth Subnitrate, Starch, Lycopodium, Kaolin, Camphor Powder. (Ja.)

Lemon Juice has a soothing effect in allaying irritation. (Al.)

Borax or Boracic Acid may be added to sponge bath. (Bt.)

Oil of Peppermint in Cosmoline recommended

(Bt.), but ointments as a rule are not to be commended.

Copper Sulphate:—10 grs.— $\bar{z}$ i, much used in the West Indies. (Vn.)

MILIUM.

Remove the little pearl-like deposit by squeezing, and apply a drop of **Iodine** or **Carbolic Acid**; or touch with **Nitrate of Silver** (Vn.); or the skin may be washed with **Soap Bark** water and gently rubbed. (Kp.)

MOLES.

(See *Nævus Pigmentosus*.)

MUCOUS PATCHES.

Cleanliness is of paramount importance; the teeth should be cleansed at least twice daily with some antiseptic mouth wash; for this purpose solutions of **Boracic Acid**, **Borax**, **Myrrh**, **Chlorate of Potash**, **Soda Bicarb.** are useful. The same solutions may be also employed as gargles and sprays for the pharynx.

The following is one of the best combinations for this purpose:

Sod. Borat.,	$\bar{z}$ iii.
Tr. Catechu.,	$\bar{z}$ ss.
Tr. Myrrh.,	$\bar{z}$ ss.
Aquæ,	$\bar{z}$ vii.

Dobell's solution, solutions of **Alum** and **Hamamelis** also beneficial. (Cl.)

Another useful formula is:

Tr. Myrrh.,	℥ ss.	
Potass. Chlor.,	℥ iii.	
Aquæ,	q. s. ad. ℥ vi.	(Sn.)

Nitrate of Silver:—Is of great value. A few applications of the solid stick or a solution, varying from 5–20 grains to the ounce, will frequently cause rapid healing. Lesions of the nasal mucous membranes may be treated by sprays of 5–10 grains. (B. H.)

Glycero-Iodine (Iodine, grs. x-glycerine, ℥i):—Gives quicker results than the acid nitrate of mercury. (Cl.)

Potass. Chlorat.:—20 grains to the ounce, is recommended as a mouth wash to be used as a preventive. (Al.)

Sulphite of Soda:—1 drachm to the ounce. (Al.)

When patches are not located on the mouth, wash with a solution of **Bichloride of Mercury** 1–2000, then dust with equal parts of **Calomel** and **Subnitrate of Bismuth**. (Sn.)

NÆVUS PIGMENTOSUS (MOLES).

Caustics:—Are the best remedies for applying to small moles; **Nitric** or **Acetic Acids** should be preferred, the surface being touched with these agents.

Electrolysis:—Is adopted for the removal of hairy growths and large moles. (Mor.)

Removal by Excision:—All large moles will require

an operation for their removal; small ones may be removed by an elliptical incision.

If there is any tendency to inflammation or malignant proliferation, immediate removal by the knife is demanded. The employment of caustics and irritants under these conditions is harmful. (W.)

All methods of removal, it must be remembered, will have a slight scar.

NÆVUS VASCULARIS.

Early treatment is generally advisable for the capillary variety and small growths.

The methods of treatment consist of **Excision** and **Caustics** for port wine marks, **Scarification** and **Electrolysis** for venous nævi, and **Excision**; in the latter instance, when the size and location contra-indicate, **Ligation** may be substituted.

Electrolysis:—Is the best method for the majority of these growths. In the capillary variety, and in port wine marks, it is best to apply by making multiple punctures in parallel lines perpendicularly to the skin and entirely through it. By this method it is possible to destroy small nævi and to diminish the disfigurement of port wine marks. A scar will be left, but it is much less conspicuous than the nævus. The use of a single needle scars less than a group; the punctures should be made at least a sixteenth of an inch apart. Applications must be repeated until the nævus is destroyed; the entire point should be gone over at each application. An interval of two weeks should elapse between each treatment. (Ja.)

Parenchymatous Injections:—Various agents have

been used, viz: **Carbolic Acid**, 2 per cent. solution, injections of 5–10 minims as in carbuncle; **Tr. Chloride of Iron**, **Tr. Cantharides** recommended by some, but there is danger of producing embolism unless it is possible to isolate the growth.

Alcohol:—5–7 minims of a 95 per cent. solution; the nævus should be encircled by a ring on which pressure is made to arrest the circulation, and the point of the syringe slowly withdrawn during injection. The tumor will gradually solidify. Injections may be repeated at intervals of several weeks, until disappearance of the growth is effected. (Al.)

Carbolic Acid "Tattooing":—A method so termed is said to give excellent results, leaving little or no scarring. It consists of puncturing the affected area, a portion at a time, with a number of small fine needles bound together; these are first dipped in a 50 per cent. or stronger solution of carbolic acid. The surface should be prepared by washing with alcohol. After application collodion is freely applied for pressure and protection. (F.)

Ligation:—Suited to some forms of vascular growths, though electrolysis is generally preferred; venous nævi too large to permit of excision may be ligated. (T. 97.)

Linear Scarification:—As employed in acne rosacea, to which the reader is referred, gives good results in small nævi and telangiectasis; it is not suitable for larger growths.

Excision:—With subsequent transplantation by the method of Shiersch, is the only reliable remedy, but belongs to the domain of surgery.

Nitric Acid, **Glacial Acetic Acid**, **Trichloracetic Acid**, **Monochloralitic Acid** are also used as cauterants, but are uncertain in their effects.

Collodion:—Employed on account of its contractia power. It is employed for capillary nævi in children and as a base combined with active agents, viz Bichloride of Mercury, Collodion (grs. viii- $\bar{z}$ i), :, caustic useful for small nævi, a circle of pure collodion should first be applied around the nævus, to protect the healthy integument; a single applicaitou is usually sufficient; a dry ischar follows which separates in a few days. (Al.) **Salicylic Acid and Lactic Acid**, 10 parts of each, with collodion 80 parts, is also used for small growths. (F.)

Creosote:—More or less diluted, applied two or three times a day, is said to give excellent results. Excoriation and ulceration is at first produced, which is finally followed by healing. (F.)

Chromic Acid:—Punctures with needles dipped into a 50 per cent. solution have been followed with success. (Kp.)

Sodium Ethylate:—Is one of the best caustics, causes little pain, should be applied on the end of a glass rod. To avoid scarring, only a small part of the nævus should be treated at one time. A crust will form which should be left undisturbed. (Kp.)

NASAL POLYPUS.

Destructive *in situ* by injection of such agents as **Chromic Acid**, **Tincture of Iodine**, or **Tannic Acid**, $\bar{z}$ i- $\bar{z}$ i, may be successful, but it results in a necrotic mass which remains in the nasal cavity as an offensive body until it sloughs away. When the polypi are numerous, this treatment is obviously distressing. (Bos.) The best method, therefore, for the removal

of these growths is by the **Wire Snare**. Removal by forceps, formerly much practiced and still used, to some extent, is condemned. (Bn.) After removal the pedicle may be touched with the galvano-cautery.

Sodium Ethylate:—Saturate a bit of cotton with the drug and apply two or three minutes; then withdraw; the mass of polypi will be almost immediately destroyed. Touch the base with the same. The application causes slight burning pain and occasionally moderate hæmorrhage. (Al.)

Tannic Acid:—In the small vesicular variety, and in case, where the growth is soft and small, there is every prospect of temporary, if not permanent relief, by application of the fine powder two or three times a day. (Wt.)

NASO-PHARYNGEAL CATARRH— CHRONIC.

(See Chronic Rhinitis.)

Local treatment is similar to that of chronic rhinitis, to which the reader is referred; little, therefore, can be added.

Important exceptions are the use of the post-nasal syringe for cleansing purposes, and the applications of sprays through the mouth. Muco-purulent discharges should be removed twice daily by washes and douches.

The following will prove satisfactory for this purpose, having a tendency to control all proliferations as well as to dislodge the mucus:

Acid. Carbolic,	grs. iii.
Potass. Chlorati,	$\bar{3}$ i.
Glycerini,	$\bar{3}$ i.
Aquæ,	ad. q. s. $\bar{3}$ vi.

Or,

Zinc. Sulpho-carbolat.,	grs. iii.
Acid. Salicylici,	$\bar{3}$ i.
Aquæ,	$\bar{3}$ vi. (Bos.)

Sodium Bicarb.:—A solution of 10 grains to the ounce (Iv.), or the following are useful for cleansing purposes:

Sodii Bicarbonatis,	
Sodii Biboratis,	
Sodii Chloratis,	āā grs. i.
Sac. Alb.,	grs. xxxvj.

Dissolve in wineglassful full of hot water.

Another useful formula is the following:

A-Naphthol.,	grs. xlv.
Alcohol,	$\bar{3}$ x.

One teaspoonful to a quart of boiled water. (T. 98.)

After cleansing, the following will also be found of service:

Gallic Acid:—By insufflation in the proportion of 1 grain to 2 of gum acacia forms, according to Ivins, a most grateful and beneficial application:

Iodine,	grs. x.
Glycerine,	$\bar{3}$ i.

Or,

Zinc. Chlorid.,	grs. x.
Water,	$\bar{3}$ i. (Iv.)

To effect a cure, radical measures and strong applications are necessary according to Bosworth, who recommends the following:

Tr. Iodine, Glycerole of Tannin, or Nitrate of Silver (grs. xx-xxx- $\bar{3}$ i), application to be made at intervals of three days or a week. Also **Lactic Acid**,

3ss-3i-3i, or **Monochloracetic Acid**, undiluted for the hypertrophies. In making these strong applications great care should be taken not to touch the palate.

Chromic Acid may be applied with good effect to the broad, flat, thickened condition of the glandular structure of the pharynx.

Galvano-Cautery:—May be employed when other measures have failed for the reduction of the hypertrophy and stitching.

NEURALGIA.

Dry Heat:—One of the best palliatives during paroxysms; may be applied by means of hot water bag, hot hop bag, or Japanese fire box. (Gn.)

Aconite:—Is useful, especially in neuralgia of the fifth pair (R.); may be applied as an ointment, or the tincture may be painted on the affected area. It also enters into the formation of various liniments, viz:

Tr. of Aconite,	3i.
Essential Oil of Mustard,	3i.
Glycerine,	3i.
Rectified Spirits,	3vi.

Rub in about two teaspoonfuls on affected part night and morning.

The following is said to be still more efficacious:

Tr. of Aconite,	3i.
Camphor,	3ii.
Chloroform,	3ii.
Oil of Cajuput,	3ii.
Tr. of Capsicum,	3ii.
Rect. Spts.,	to 3vi.

Scent with oil of origanum. (T. 98.)

Aconitia:—In the form of an ointment (2 grains to the drachm), or a 2 per cent. solution of the oleate in oil, will afford marked relief. Its local use being not free from danger, caution must be exercised and never apply over denuded surfaces. (F.)

The following is Ludlow's formula, which is recommended for "any local pain;" a portion the size of a pea is to be rubbed in over the affected part. It is also serviceable in inflammation of joints:

Aconitinæ,	grs. iss.
Atropinæ Sulph.,	grs. ss.
Ol. Tiglii.,	M ii.
Petrolati,	℥i. (Sm.)

Anodyne Colloid:—The following mixture is highly recommended; it forms a collodion which is brushed over painful parts five or six times, forming successive films. Absorption of the alkaloid may be facilitated, if desired, by covering with spongo-piline:

Amyl Hydrat.,	
Collodion (B. P.),	āā ℥i.
Aconitine,	gr. i.
Veratrine,	grs. vi. (T. 97.)

Apone:—A preparation specially so-called is made as follows: Capsicum, ℥viss; aq. ammonia, ℥iij ℥ii; thymol, chloral hydrat., āā ℥iiss; alcohol, Oij; the capsicum is macerated for a month in the alcohol and ammonia mixed; it is then expressed and the thymol and chloral added. The preparation is then painted on the skin pure or diluted. (F.)

Belladonna:—This extract thinned with glycerine, and painted on, is effective (Ty.); the liniment and ointment is especially recommended in intercostal and facial forms. (R.)

Capsicum:—Is used in a strong infusion which is

applied on lint and covered with gutta percha. (R.)

A plaster may be made by incorporating the tincture with gum arabic and spreading the mixture on paper. (F.)

Chloral Camphor(equal parts triturated):—Is sometimes useful. Morphia may be added with advantage. (B.)

Counter-Irritation:—Will often afford relief, sinapisms, an ammonia rubefacient, and in some cases a cantharides blister may be applied with benefit over the affected nerve. (Al.) The latter, though often of service, has, however, been superseded by more modern and less disagreeable measures.

Chloroform:—A deep injection of from 10–15 minims in the neighborhood of an affected nerve has been found extremely valuable. Rarely does any local trouble ensue from its use except temporary induration. Long-standing neuralgias of the superficial division of the fifth pain have been relieved. Tyson says spirits of chloroform should be used. This remedy must be employed cautiously, as it may cause sloughing. The same writer recommends it more especially for sciatica. It also enters into the formation of various anodyne liniments; a useful one is as follows: Chloroform, tr. aconite, āā ʒss; lin. saponis, ʒi. Moisten a bit of flannel and apply covering with oiled silk.

The following form effective counter-irritant liniments:

Chloroform,	
Ol. Terebinth.,	āā ʒi.
Lin. Sapon.,	ʒii.

Or,

Chloroform,	
Lin. Camphor.,	āā ʒi. (B.)

Cocaine:—Might be expected to constitute a useful palliative, but in order to obtain action through the skin it must be only employed in ointments or solutions in the strength of 10–15 per cent. A 20 per cent. solution dissolved in oil of cloves, 5–10 minims being rubbed in with the finger over the seat of pain is recommended. Strong solutions must be used with caution on mucous surfaces. The hypodermic use is more effective; the dose is $\frac{1}{4}$ gr. The danger of forming the cocaine habit must always be taken into consideration. (Ty.)

Guaiacol:—Compresses wet with 15 drops to 1 drachm and placed over the part are reported to afford almost instant relief. The drug should be pure and left in contact with the skin only a short time, otherwise absorption may occur and which may produce fall of temperature and symptoms of collapse.

The following solution is to be painted on two or three times a day, covering the part afterwards with cotton:

Menthol,	
Guaiacol,	ãã grs. xv.
Absolute Alcohol,	℥v.
Use little less than a drachm.	(T. 97.)

Ether:—In 15 drop doses, subcutaneously, or mixed with alcohol and injected as near as possible to the seat of pain, has been successful in rheumatic neuralgias, sciatica and torticollis. (Sm.)

Essential Oils:—Have the power to relieve the pain of sensory nerves, especially the oil of cloves, a solution of which in rhigoline is a nostrum for superficial neuralgia.

The following combination may be employed :

Ol. Caryophylli,	
Ol. Gaultheriæ,	
Ol. Thymi,	āā ʒi.
Tr. Benzoini,	
Tr. Cinnamomi,	āā ʒiv.

Apply on lint and cover with oiled silk. (B.)

Methyl Chloride:—Is an effective analgesic in the form of a spray. Employed in this manner it is often very satisfactory in many forms of neuralgia. A large percentage of cures has been reported. (B.)

Morphine:—By hypodermic injection affords relief in all forms, but should only be employed as a last resort because of the danger of forming the habit. (Gn.) This is especially true in chronic forms.

Mud Baths:—Such as those of St. Armand, Schwalbach and Franzenbad are of great benefit in chronic forms dependent upon debility, neurasthenia and hysteria. (Ty.)

Osmic Acid:—The 1 per cent. solution in water and glycerine has been used with good effect by hypodermic injection over the course of the nerve in sciatica. (Ty.)

Peppermint Oil:—An old remedy. May be painted along the course of the nerve, or applied with cotton, often with good effect. (Sm.) Combined as follows, it has been found of great service in neuralgic and other forms of headache:

Oil of Peppermint,	5 parts.
Essential Oil of Mustard,	1 part.
Camphor,	2 parts.
Ether,	10 parts.
Rectified Spirit,	30 parts.

Apply with a camel's hair brush. (T. 97.)

Veratria:—In the following formulæ; a small quantity is rubbed in over the seat of pain:

Veratrine,	2 parts.
Oleic Acid,	98 parts.

Or,

Veratrine,	4 parts.
Alcohol,	6 parts.
Benzoated Lard,	98 parts. (H.)

Actual Cautery:—This may be used to great advantage in the treatment of long-standing cases, especially of the larger nerve trunks, when other measures have failed.

The probable occurrence of scars must be taken into consideration. (F.)

Strychnine:—Subcutaneously, in full doses, is of benefit when impaired nutrition is the cause. (Ty.)

Electricity:—Preferably in the form of galvanism, is valuable in many cases; the positive current over sensitive points, negative over spine at supposed origin of irritation. The strength will vary from 5–35 milliampères, according to the susceptibility of the affected part. (Gn.) While the constant current is most frequently employed, faradism may also be used. Experience has shown that the direction of the current may be ignored, though it is commonly recommended to place the positive pole over the painful part. A sedative effect is best obtained by a weak galvanic current, just enough to produce a trembling sensation. (H.)

The application of drugs by electricity has been successfully employed, the drug in solution being applied with the positive pole with a specially constructed electrode. Cocaine (10 per cent. solution) will give relief which will last about eleven hours. 10–15 milliampères should be used for from five to fifteen minutes. Morphine may be administered in the same way. (H.)

Acupuncture and Aqua Puncture:—Are measures which are of service, the latter often remarkably beneficial. (B.)

Excision:—Has been used as a last resource, with success and failure. (Ty.)

NEURASTHENIA.

The measures recommended for hysteria are equally applicable to this condition, especially Wier Mitchell's "rest cure." (See Hysteria.)

NIPPLES, FISSURED AND SORE.

Wash the nipples before each nursing, and to harden them, apply daily **Green Tea**, **Brandy**, **Alcohol**, **Port Wine**, **Hamamelis**, or **Lime Water**. (Bt.)

For painting on the part after preliminary disinfection the following protective preparations are efficacious: **Collodion**; **Gutta Percha** (dissolved in **Chloroform**), which has the advantage of not being soluble in the child's saliva; and **Benzoin**, which forms a protective varnish of great value. The latter is also useful mixed with equal parts of glycerine. (Bt.)

Glyceroles, or **Lotions of Hydrastis**, **Calendulæ**, **Arnica**, **Hamamelis**, **Phytolacca**, and **Borax** are all used in the proportion of one drachm of the remedy to half an ounce of glycerine.

Tannate of Glycerine; **Cerates of Graphites**, **Carbolic** and **Boracic Acids**, **Hamamelis**, **Hydrastis**, **Calendula**, and **Phytolacca**. (Bt.)

Nitrate of Silver:—The crayon touched to the nipple carefully and gently is sometimes very effective when the part is ulcerated. (Hpl.) Agnew advised the application of a 50 per cent. crayon to the bottom of the fissure in obstinate cases. The nipple should first be cleansed thoroughly and afterward washed with a little milk and water, a dressing of zinc oxide ointment is said to complete the cure.

Nitrate of Lead:—As a cicatrizing astringent is very useful dissolved in glycerine or brandy in the proportion of grs. x- $\bar{3}$ i. It should be applied after nursing and the child should not be allowed to take the breast until the nipple has been thoroughly washed. (N.)

Rhatany:—As an ointment or wash has been very successful. (Wa.) Use a watery solution of the extract, or an ointment in the proportion of 1 part of the extract to 15 of cocoa butter.

Iron:—An effective application is composed of 2 drachms of the liq. ferri subsulphate with 6 drachms of glycerine. This is applied with a camel's hair brush. (B.)

Cocaine:—4 grs. with distilled water 1 oz. may be applied, wash off thoroughly before nursing. (Sn.)

Shields of rubber or zinc may be worn.

NODES.

Stramonium:—A leaf of the plant soaked in spirits and laid on the part will often act as a palliative. (Al.)

Mercurial Plaster:—One of the best applications, especially for syphilitic varieties. (F.)

Iodized Vasogen:—Will often prove effective after mercurial plasters fail to relieve. It should be applied with caution several times a day. (F.)

The following ointments will be found of service:

Iodi,	
Terebinth. Canaden.,	āā ʒi.
Collodii,	ʒiv.
Apply with a brush.	
Or,	
Morphiæ,	grs. viii.
Hydrarg. Oleat. (10 to 20 per cent.)	ʒi.
Apply with a brush.	
Or,	
Hydrarg. Biniodid.,	grs. vij.
Potas. Iodidi,	ʒi.
Adipis,	ʒi.
Or,	
Cadmii Iodid.,	ʒi.
Adipis Præparat.,	ʒi.
Linf. Aconiti,	ʒii. (Sn.)

ONYCHIA.

Lead Nitrate:—Has cured cases. It should be thoroughly sprinkled on the ulcerating surface. After a day or two the crust which forms is removed and the sore takes on a healthy action. Pain and fetor are diminished and resolution is sometimes complete in a week. (Hel.)

When there is much pain the following:

Hydrarg. Chlor. Mitis,	
Pulv. Opii,	
Ext. Belladonnæ,	āā grs. iii.
Ung. Aq. Rosæ,	ʒss. (Vn.)

Alum. Usta:—Is useful in the following wash:

Alum. Ustæ,	grs. iii.
Zinc. Sulphat.,	grs. ii.
Plumb. Acetat.,	grs. ii.
Aq. Destill.,	℥i. (Al.)

Resorcin:—10–20 per cent. ointment or plaster will, it is claimed, often abort the disease if seen early. (Ja.)

The pustules should be evacuated, cleansed with **Carbolic Acid** solutions, and dusted with antiseptic powders such as **Europen**, **Airol**, **Xanoform**, etc.

Removal of Matrix:—Is recommended for cure, cutting away the entire matrix; simple evulsion will not answer. After removal dress with iodoform. (Hel.)

OÖPHORITIS.

(See Pelvic Inflammation.)

OPHTHALMIA NEONATORUM.

In the first stage, strict cleanliness, constant removal of all secretions, and the use of antiseptic irrigations are essential. No strong or irritating solution should be applied at this period. In the second stage, and not until then, nitrate of silver is the sovereign remedy. If only one eye is affected the other should be protected.

Antiseptic douches should be administered as preventives to women with vaginal discharges just before confinement. For this purpose solutions of

Bichloride of Mercury are recommended (Mac.) Créde advised as a preventive a 2 per cent. solution of **Nitrate of Silver** dropped into the eyes of newly-born infants. Other measures have also been advised, with the same end in view, but none are as certain in their effects as nitrate of silver. If the disease is of an entirely purulent character, active and energetic measures should at once be instituted, otherwise the infant will lose its eyesight. The indications are essentially the same as those of purulent conjunctivitis in adults.

The general line of treatment may be summarized as follows:

1. During the earlier stages when inflammation and œdema of the lids is severe, in addition to strict cleanliness the constant application of cold should be maintained in the following manner: Take square compresses of lint, lay them upon a block of ice, then when cold, place them on the swollen lids. Change the compresses as frequently as it is needful to keep up a continuous uniform impression.

2. The discharge should be constantly removed; to accomplish this proceed as follows: Gently separate the lids; wipe away the tenacious secretion with bits of moistened absorbent cotton and irrigate the conjunctival sac freely with an antiseptic solution. Care should be observed not to permit the point of the pipette to come in contact with the cornea. A saturated solution of boracic acid or bichloride of mercury in solution not greater than 1 grain to the pint may be used for irrigation; the former is the more useful. (T. 96.)

Nitrate of Silver:—As soon as the discharge becomes free and creamy the remedy should be applied as fol-

lows: Carefully evert lids and secure exposure of the inflamed tarsal cartilage. Remove all discharge of lymph by irrigation; wipe away all adherent particles with moistened cotton and carefully touch the areas thus prepared with a solution of 10–20 grains to the ounce by means of a cotton mop. Neutralize the excess with a solution of common salt 15–20 grains to a cup of water. Continue applying the salt solution until a clear red surface is obtained; then return lids to position. The cornea should be carefully inspected before leaving. Finally apply pure vaseline to the lids, and introduce some within the conjunctival sac.

4. **Eserine**:—A solution of $\frac{1}{8}$ – $\frac{1}{2}$ gr.– ʒi , one drop three or four times a day according to severity of case, should be used if the cornea becomes hazy or a small ulcer forms at the border; also **Atropine Solution** (4 grains to ʒi), 2 drops may be instilled at night. Caution should be exercised lest constitutional effects of these drugs be obtained. If corneal haze continues, replace cold applications with hot, using carbolyzed water at 120° . (T. 96.)

Potass. Permang.:—Flushing the conjunctival cul-de-sac with a solution of 1–5000 is recommended. A special laveur may be used and about 2 pints applied in each eye twice a day. (T. 96.)

Formalin:—In the strength of 1–1000–500 may be employed with great benefit as an antiseptic during the stage of corneal complication. When the ulcer is not large or is only beginning to appear, this treatment is strongly indicated. (N. O.)

Mercury Oxycyanide:—This remedy, it is claimed, has antiseptic powers equal to those of the bichloride, with the advantage of being less irritating and of

possessing less power of coagulating albumen. Solutions of 1-500 have proved effective. (T. 98.)

Iodoform:—Finely powdered and dusted on the conjunctival sac after cleansing is employed; may be applied at first even before cord is cut. (T.98.)

ORCHITIS.

Rest in bed and support of the parts as in epididimitis.

Laudanum or Tobacco stupes, or both combined, are often helpful. A piece of flannel is wrung out in hot water, then dipped in the laudanum or a strong infusion of tobacco and wrapped around the testicle. A piece of oiled silk is placed over the stupe and the parts are wrapped in cotton and lightly bandaged. (B. H.)

Carbolic Acid:—A 2 per cent. spray applied for fifteen minutes daily is highly recommended. The parts are afterwards wrapped in cotton and supported. This spray should not be used more frequently than the time mentioned for fear of causing excoriation of the skin. (Cl.)

Belladonna Ointment:—Spread on cloths and wrapped around the testicle is used to subdue pain. (B. H.)

Guaiacol:—Applied to the groin and inner aspect of the thigh relieves pain and lowers temperature. (Sj.)

Poultices:—Should be used with caution. In the beginning of the attack applied for a few hours they are of service. Long applied they increase engorgement and pain. (B. H.) Hop poultices are indicated both in specific and simple orchitis. (Al.)

Ammonium Chloride:—Forms an excellent discutient application in inflammatory swellings, and may be employed in this condition when applicable in the proportion of 1 drachm to 1 ounce each of rectified spirits and water. Cloths are moistened with the solution and frequently applied. (B.)

Ice:—Is applied with the hope of aborting the inflammation, and may be employed if the patient is seen at the onset of the attack. But its continued application is not desirable if the disease has progressed to any extent, for the possibility of devitalizing the parts and causing gangrene after effusion has occurred, must be taken into consideration. (Mor.)

Puncture of the Tunica Albuginea:—Employed with gratifying results; for the relief of pain and tension, it is very generally recommended. (Mor.) Complete antisepsis should be observed.

Suspensory Bandages:—Should be worn after convalescence. (Mor.)

OTITIS, EXTERNA, CIRCUMSCRIPTA— FURUNCLE OF THE AUDI- TORY MEATUS.

The following are useful for aborting the furuncle: **Mercury** (the **Yellow Oxide**), grs. ij– $\bar{z}$ i, or the **Oleate**, 10 per cent., as ointments; **Nitrate of Silver** (the crayon application); and **Menthol**, 10–15 per cent. in oil.

For a soothing effect, the following emollient ointments, painted on the wall of the meatus, are of benefit: **Cold Cream**, or **Hydrarg. Ammoniat.**, grs. i–ij– $\bar{z}$ i of **Ung. Aq. Rosæ**. (Bn.)

Also irrigations with hot water, to which Laudanum may be added for the relief of pain.

Other applications which may be employed are:

Carbolic Acid and glycerine, 1-20.

Burow's Liquid (see Appendix II.)

Liq. Plumbi Subacetat Dilut., a few drops.

Salicylic Acid in collodion, $\text{ʒi}-\text{ʒi}$.

Tr. Iodine or Pure Glycerine painted on.

Belladonna Ointment.

When the furuncle has formed, it should be incised by Sexton's, Buck's or Politzer's knife.

After incision the following washes may be used for irrigation, and for loosening crusts of discharge:

Mercuric Bichloride, 1-10,000.

Soda Bicarbonate, grs. x-xx- ʒi .

Borax, grs. x-xx- ʒi . (Bl.)

OTITIS, EXTERNA, DIFFUSA.

Heat and Moisture:—Applicable to simple cases. Use an irrigating douche of hot water, or frequent instillation of hot water into the upturned ear. These may be repeated as often as the patient desires. Laurel water may be substituted for plain water.

The following are useful instillations for the relief of pain:

Morph. Sulph.,	grs. iv.
Aquæ,	ʒii .
Ten drops warm in the ear.	
Atrop. Sulph.,	gr. i.
Aquæ,	ʒi .
Five drops warm in the ear.	

Alcohol:—Pure, instilled into ear is said to abort inflammation and reduce swelling. (Bn.)

Incision:—May be employed when other means have failed to check the inflammation. A careful examination should be made with the mirror and the most inflamed spot located. The use of the probe for this purpose is contra-indicated. A bold incision, clear to the bone, is often followed by relief of pain and improvement. (Burnett.)

Mild Syringing—With warm water (medicated), with carbolized soap, boric acid, borax, salt or bicarbonate of soda, should be employed when the discharge is sero-sanguinolent, for then the canal is exceedingly tender and intolerant of any irritant or stimulant. A cotton wool brush may be employed for cleansing; exercise care in its application, working towards the outlet of the canal without undue pressure. (Bl.)

Impalpable Powders or solutions of **Alcohol** are indicated when the discharge is sero-purulent, thick and irritating. Of the powders, the most effective are: **Boric Acid**; **Borated Calendula**; **Salicylate of Chinoline** (1 part with 16 of boric acid); **Resorcin** (1 part boric acid, 8 parts); **Boric Acid and Oxide of Zinc**, equal parts. These should all be used sparingly. The most effective way in which to apply these powders is to insert an ordinary goose quill into one end of a flexible rubber tube the free end, of which is held in the mouth while the other is dipped into a saucer containing the powder, a little of which fills the quill, which is aimed at the desired part; a slight puff from the mouth deposits the powder.

The following liquid preparations are recom-

mended:

Boric Acid, saturated solution.

Zinc Sulphate, gr. i- $\bar{z}$ i.

Pyoktanin, 1-1000-2000.

Solutions should be used warm and dropped in.

Nitrate of Silver fused on the end of a silver probe or a solution on a cotton wool brush, or **Alcohol** as strong as the patient can bear it are suitable agents for the reduction of redundant growths. (Bn.)

OTITIS MEDIA.

ACUTE CATARRHAL OTITIS MEDIA:

Plantago:—A glycerole made of equal parts of the fluid extract from the fresh plant mixed with glycerine, equal parts of, distilled and filter. Five drops hot in the ear for the relief of pain and local inflammation. (Ho.)

In the following combination, it is said, the drug scarcely ever fails to relieve:

Fld. Ext. Plantago Maj.,	$\bar{z}$ iv.
Tr. Belladonnæ,	gtts. xv.
Tr. Aconiti Rbd.,	gtts. x.
Sol. Morph. Sulph. (Magrudie),	gtts. xx.
Aq. Destill.,	q. s. ad. $\bar{z}$ i.

Four or five drops warm in the ear at intervals of from ten minutes to two hours. (Str.)

Another combination is the following:

Fld. Ext. Plantago,	$\bar{z}$ i.
Fld. Ext. Belladonnæ,	gtts. x.
Glycerini	
Aq. Destill.,	āā $\bar{z}$ iii.

A few drops in the ear for pain. (Bl.)

Morphia:—5-10 minims of Majendie's Solution

may be dropped into the ear for the relief of pain, repeating the doses every two hours, as indicated. (Bl.)

Mullein Glycerole:—Take fresh flowers (old are inferior), digest in Jamaica rum ten days, express the extract, and use equal parts with glycerine and distilled water. An excellent preparation with which to follow hydrogen peroxide, which should never be used alone. (Ho.)

Atropia:—In the following combination may be dropped into ear for relief of pain: Atrop. sulph., grs. ii; acid. boraci, grs. x; aq., $\bar{z}$ i. (Bn.)

Cocaine Hydrochlorate:—4 per cent. solution, a few drops in ear for relief of pain.

Local Abstraction of Blood:—Is valuable in the first stages of both acute and purulent forms. Leeches are of great value in those cases attended with intense pain and when there is great hyperæmia, infiltration of parts and engorgement of the periosteum and mucous membrane. In many instances further progress of disease is arrested. Artificial leeches may be used and are decidedly preferable. (Dch.)

Hot Douche:—Water poured into the meatus will frequently relieve pain at once when the artificial leech has failed; boric acid may be added, $\bar{z}$ ss-Oj. (Bac.) Lucae's douche glass may be conveniently used.

Nitrate of Silver:—Applied by a mop to the pharynx is of benefit when there is hyperæmia in that locality. The strength of the solution for children should be 10–15 grains to the ounce, for adults 15–20 to the ounce. The Politzer may also be used occasionally. (Bck.)

Steam:—Introduced into the ear is an excellent

method of applying heat; care must be exercised that it is not too hot. (Str.)

Carbolized Glycerine:—10–20 per cent. warm instillations are attended with good results. (T. 97.)

Menthol Gauze:—Impregnated with 10–15 per cent. solution in oil, and inserted into the meatus for twenty-four hours at a time, has been used with good results. (T. 97.)

Inflation of the Ear Drum:—May be employed in less severe cases with slight hyperæmia, using the Politzer method or the catheter. The former should be constantly employed for the purpose of relieving accumulations of mucus and fluid, for the restoration of the drum to its proper position, and to prevent formation of adhesions. (Bn.)

Paracentesis:—If in spite of treatment the membrum tympani is bulging with indications of perforation, it should be punctured with the paracentesis needle and afterward douched with a solution of boric acid or bichloride of mercury, 1–4000. (Bl.)

CHRONIC CATARRHAL OTITIS:

As the majority of cases arise from lesions of the nose or vault, treatment should first be directed to those localities. (Bac.)

The patient should be placed in the best hygienic surroundings, guarding against changes of temperature and moisture as much as possible.

Inflation and Catheterization:—When there is hypertrophy and hyperæmia of the eustachian tubes these measures are indicated, together with local treatment to the naso-pharynx. Bacon states that it is difficult to say how long the inflation treatment should be continued. In most cases nothing is

gained beyond the third week, and on the other hand improvement may not begin until the fifth week.

All manipulations should be made with the utmost gentleness. When the catheter is in position it should not cause pain. (Str.)

The following are recommended for application to the pharyngeal surfaces:

Nitrate of Silver, applications should be used to the vault of the pharynx as long as hyperæmia is recognizable to any degree. The influence of the remedy is not confined to the actual areas of application. (Bac.)

Potass. Iodidi,	grs. x.
Iodi,	grs. v.
Glycerini,	℥i.

Apply with brush in old cases with glandular enlargements.

Tannic Acid,	℥ ss.
Glycerine,	℥ i.

Or,

Alum,	℥ ss.
Glycerine,	℥ i.

Apply with a brush in acute aggravations with a tendency to ulceration.

Or,

Fld. Ext. Hydrastis,	℥ i.
Glycerine,	℥ i.

Or,

Pini Canad.,	℥ i.	
Glycerini,	℥ i.	(Str.)

The following is recommended as serviceable in offensive cases:

Iodoform.,	grs. x.
Acid. Tannici,	gr. i.
Sac. Lac.,	℥jss.

This should be applied with a powder blower. (Str.)

Injection of vapors or liquids into the tympanum through the eustachian tube, according to modern writers, has not been attended with satisfactory results. Of the operative procedures excision of the drum head and the two larger ossicles appears to be the most satisfactory. (Bn.)

ACUTE PURULENT OTITIS MEDIA :

Severe cases should be confined to bed and the measures recommended for the acute catarrhal form, such as anodyne instillations, hot water douches, local depletion, and paracentesis are indicated.

Heat:—Dry heat affords relief of pain, especially in the first stage. It may be applied in the form of hot bran, hot salt, or hot water bag. Moist heat may be conveniently employed by filling the upturned ear with water at a temperature of 105° , and applying immediately a hot flaxseed poultice, which in turn is covered with flannel. Douching the ear with hot water for ten minutes at a time is another method, but is not as convenient, and is no more effective than the above. (Bac.)

Cold:—Leiter's coil constitutes the most effective mode of applying this agent, which is especially indicated when symptoms of mastoid inflammation are impending. (Dch.)

Artificial Leech:—If the patient is seen in the early or hyperæmic stage, inflammation can frequently be arrested by the application of the artificial leech, either Burnett's, Heurtelope's, or Bacon's. These contrivances are vastly superior to the ordinary leech. They should be applied in front, and below the tragus. (Bck.)

The following anodynes will also be found useful for the relief of pain in the earlier stages:

Atropiæ Sulph.,	grs. ij.
Acid. Borici,	grs. x.
Aq. Destill.,	℥i.

First warm and then drop into the meatus and insert a bit of cotton.

Morphine, Atropine, and Cocaine, as mentioned in the acute catarrhal form, may be instilled for the relief of pain.

Paracentesis.—The ear should be frequently examined, and as soon as bulging of the ear drum is discovered, which usually occurs in the posterior half, the membrane should be relieved with a paracentesis needle. (Str.)

After this it may be necessary to force out the secretion by the Politzer method. This should be done frequently during the course of the disease, very gently when there is pain and more forcibly as the acute symptoms subside. After paracentesis, the discharge should be promoted with the ear douche as in acute catarrhal otitis media. (Br.)

Boric Acid.—A saturated solution warmed and dropped into the ear several times a day after thorough cleansing of the canal may be used with benefit after the acute symptoms have begun to abate. (Bn.)

For antiseptis and cleanliness, solutions of **Formalin, Bichloride of Mercury, Hydrogen Peroxide, Carbolic Acid, Creolin**, etc., as mentioned under the chronic purulent form, will be called for. Boyle uses the following with good effect :

Formalin,	gtts. iii.
Hydrogen Peroxide,	
Boric Acid, Saturated Solution,	āā ℥ss.

A few drops in the ear every two hours.

Powders.—Remedies in this form are of service when the perforation is large and the inflammatory symptoms have not been severe. The same pow-

ders mentioned for use in the acute catarrhal form are also indicated in this variety. When the discharge is profuse and contains considerable mucus, remedies in this form should not be used.

Astringent Injections:—Are indicated in place of powders when there is profuse mucous discharge, viz:

Sulphate of Zinc, Acetate of Lead, Sulphate of Copper, all in the proportion of grs. ii–iv–ʒi. (Bn.)

Injections of Warm Water:—Through the catheter into the middle ear are recommended in cases when pain continues uninterruptedly after perforation of membrana tympani in obstinate forms and in painful inflammation of the mastoid process. (Fld.)

Tr. Iron Chloride on a probe, **Nitrate of Silver** or fused **Chromic Acid** used with extreme care may be applied to the granulations which form on the edges of the perforation or in the middle ear. If chromic acid is used especial care must be taken to touch nothing but the granulation. (Bck.)

The pharynx should receive treatment with soothing sprays during the course of the disease.

CHRONIC PURULENT OTITIS MEDIA (Otorrhœa):

Antisepsis and asepsis must be maintained. Some aurists prefer using a syringe as more effectual; others mop out the discharge with absorbent cotton on a cotton holder; then mop the whole external auditory canal and its fundus with cotton soaked in the antiseptic fluid, which is squeezed out into the parts.

The following solutions are recommended for this purpose to be used warm:

Formalin, 1–1000–2000.

Carbolic Acid, 1–40.

Mercuric Bichloride, 1–3000–4000.

Salicylic Acid, grs. iii- $\bar{z}$ i.

Creolin, 1-1000.

Hydrogen Peroxide:—If the discharge is very thick a solution, 12 per cent., may be slowly instilled, applying a few drops at a time until effervescence ceases. This remedy, of course, cannot be heated, and therefore must be used at the temperature of the atmosphere. (Str.) When the discharge is profuse, cleanse with the peroxide every two hours and dry thoroughly with absorbent cotton. (Bl.)

After cleansing, the ear should be carefully examined for granulations, polypi, denuded, carious, or necrotic spots in the bony parts, which if present should receive appropriate treatment. When asepsis has been established it should be maintained by applications daily, or every other day, as the nature and quantity of the discharge indicates. For this purpose the antiseptic solutions mentioned may be employed with a mop or in the form of one of the following powders, the latter are generally regarded as superior, as the parts are thereby rendered aseptic more continuously.

Boric Acid:—Pure, or **Calendula** mixed with **Plantago**. The latter is prepared thus: 1 part of sugar of milk is mixed with fluid extract of plantago, as much being added as will thoroughly moisten the sugar. Triturate this in a mortar, add equal parts of boric acid; this, according to Houghton, gives better results than the acid alone.

An effective preparation is as follows:

Iodoform,	grs. ix.	
Tannic Acid,	gr. i.	
Sugar of Milk,	grs. xc.	
Triturate thoroughly.		(Str.)

* NOTE.—Both Boric Acid and Iodoform have a tendency to cake in the ear, hence some caution is necessary in their use.

Resorcin, Aristol, Dermatol, pure, or mixed with Boric Acid and Hydrastinated Boric Acid, are recommended.

Airol:—Has been used successfully.

Oil of Eucalyptus:—1 part, vaseline 8 parts, applied on cotton, acts especially well in offensive cases. The patient may also use at night three or four drops applied on a piece of twisted cotton. (Str.)

Various astringent solutions are also used, viz.:

Zinc Sulph. grs. ii- $\bar{z}$ i.

Zinc Sulpho-Carbolate, grs. v- $\bar{z}$ i.

Glycerite of Tannin,

Nitrate of Silver, grs. i-x- $\bar{z}$ i.

Acetate of Lead, grs. ii- $\bar{z}$ i.

Cadmium Sulphate, grs. ij- $\bar{z}$ i. While more astringent is at the same time more irritating than zinc.

Treatment by antiseptic powders or instillations should be applied daily for a few days; then every other day, and at longer intervals as the discharge lessens. If, after a month or two, benefit is not observed, the mucous membrane of the drum cavity granulating or swollen, drainage defective, and the malleus or any part of the typanic walls, carious, the membranum tympani, the malleus and the incus should be removed by excision. (Burnett.)

The granulations which may follow chronic supuration of the middle ear usually disappear under treatment by antiseptic powders, but if such is not the case the following may be used:

Alcohol instillations.

Chromic Acid :—Dip a probe into deliquescent crystals and carefully apply, under powerful illumination. If done by an unskilled hand injury will be caused. Potass. Bichromate, saturated solution. Boric Acid,

Alcohol, and Water, equal parts. The latter two are recommended by Sterling.

PARALYSIS.

Electricity:—Widely used in the various forms; in apoplectic paralysis it is often proposed, but the results are not encouraging. In these conditions it should not be applied too soon after the seizure, and when applied to the head at least a month or so should have elapsed. (Gn.) Electrical treatment is much the same for all forms of cerebral paralysis varying only with the seat of lesion and the muscles affected. (Rk.) Galvanism and faradism are both employed. De Watteville's method in hemiplegia is to apply a large electrode to the nape of the neck and the other, also large, on the diseased side so as to include the seat of lesion between the two. In hemiplegia the constant current may be applied to the brain to improve its nutrition and the faradic to the muscles to prevent atrophy and loss of function. (Bw.) If the muscles are weak and flabby much improvement will follow faradization. A current just strong enough to cause contraction should be used. The muscular contractions which ensue after a time, and which appear principally in the forearm and hands, may be treated by the continuous current to the flexors and an interrupted or faradic current to the extensors. (B.)

In lead paralysis, if the muscles fail to respond to faradization and react when stimulated by a slowly interrupted galvanic current, the interrupted galvanic current may be first employed followed by the faradic, when the muscles have so far improved as to respond to the latter.

For facial paralysis the positive pole should be placed on the pes anserinus or on the mastoid process and the negative is passed over the peripheral expansion of the nerve, so that all the enervated muscles may be stimulated to contract. A current of sufficient strength to produce muscular contraction should be employed.

In paralysis, of spinal origin, electricity will often give excellent results, but not, however, in all forms.

In the infantile variety treatment should begin early, but after the inflammatory symptoms have disappeared good results are obtained by galvanism and faradism of the paralyzed muscles, as well as galvanization of the spinal nerves and plexus. (B.)

***Chapman's System of Applying Heat and Cold to the Spine** for paralysis and other diseases. A successful employment of Chapman's method demands a knowledge of the anatomy and physiology of the vaso-motor nervous system.

To apply heat and cold, which are the essentials of the treatment, rubber bags are used. The apparatus for hot water consists of two narrow bags 8-10 inches long kept parallel by cords or straps, the intention being to direct the heat upon the sides rather than the centre of the spine. For emergencies a yard of flannel 8-10 inches wide rolled from both ends nearly to the middle will answer. These parallel flannel rolls are to be dipped in hot water 115°-120° F. and applied. Other excellent substitutes are Edison's electro-therm, the Japanese hand-warmer, hot salt or sand, or lime while slaking in flat metal boxes.

*Condensed by Dr. Jas. Robie Wood, from his clinics at the Metropolitan Hospital, Blackwell's Island, New York, and especially prepared by him for this work.

Chapman's ice bag has no open space like the hot water bag, as it must cover the spine itself as well as its sides; it is 10–18 inches long and about 4 inches wide, narrower for children and wider for very large persons. Usually there are 3 compartments, but they are not absolutely necessary. To prevent leakage the bag is securely tied or clamped at the top. When such a bag cannot be procured, an ox's gullet or a section of gut from any animal can be substituted. Chemical refrigerants may supply the place of ice.

The ideas in the application of heat and cold to the spine are simply these: To contract arteries which are controlled from certain nerve centres heat should be placed close to those spinal centres; this stimulates the vaso-constrictor nerve fibres and through them diminishes the calibre of arteries within their influence.

Applied upon the same region the action of cold is directly opposite; by reducing the circulation within and near the spinal column it partly paralyzes the vaso-constrictor filaments which supply the muscular walls of blood vessels, thereby permitting more or less dilatation of arteries under their control.

To make use of this knowledge it must first be ascertained whether arterial narrowing or widening is demanded in any given disease; in other words, conditions are the first consideration. For instance, in the same malady anæmia or hyperæmia of the brain may occur. Now in cerebral *anæmia*, if an ice bag be applied over the lumbar and dorsal vertebræ, that part of the spinal cord having no direct influence upon blood vessels within the cranium, the cold by causing dilatation of the small arteries of the abdomen and legs would produce a rapid fall in blood pressure and syncope might result.

On the contrary, heat upon the same locality, by inducing contraction of arteries in legs and abdomen, would increase the flow of blood to the brain. In cerebral *hyperæmia* cold over the same vertebræ would relieve cerebral congestion, while heat would intensify that congestion. At the very onset of apoplexy, in many cases, the dorso-lumbar application of an ice bag will control the cerebral circulation so as to prevent prolonged coma, and not infrequently consciousness will be restored within a few hours.

In the cases of paralysis presented at this clinic to-day you have an opportunity of seeing the marked benefits of Chapman's system of treatment. None of these patients has had more than one hour's application of ice each day; such chronic cases generally require two or three hours' treatment daily. This old woman has had two attacks of apoplexy and has been paralyzed on one side for eight months. Without assistance, other than a cane, she has walked down stairs to present herself at this clinic after four weeks' dorso-lumbar ice applications and an occasional laxative, which latter is very important during treatment at least once or twice a week.

Here is a patient with both lower extremities paralyzed and atrophied from spinal disease. Her most distressing symptom, constant involuntary discharge of urine and fæces, one week after the first dorso-lumbar ice application, was under complete control. In other respects she has not as yet improved.

Let me mention a few of the many maladies in which *the Ice Bag applied upon the Dorso-Lumbar Region* will be more or less palliative, if not always curative, when the proper conditions are present. They are acute and chronic cerebral and spinal con-

gestions and inflammations, cerebral and spinal apoplexy, immediate or threatened sunstroke with cerebral congestion; paralysis from various causes, to supply nutrition when nerve degeneration is not too far advanced; spasmodic diseases, such as epilepsy and some forms of general convulsions; painful spasmodic affections dependent upon irritation of some portion of the spinal cord; spasmodic contraction of muscles; atrophied muscles and organs; trismus and tetanus; angina pectoris; locomotor ataxia; neuralgia; neuritis and neurasthenia; headaches, especially those from grief, mental and physical exhaustion and alcoholism; many hysterical conditions; dysmenorrhœa particularly when complicated with headache; amenorrhœa with or without maniacal symptoms; insomnia; during chill of intermittent fever; cold feet; gastric disorders; constipation; sporadic and Asiatic cholera; chronic diarrhœa; obstinate nausea and vomiting, especially seasickness; eczema and some serious troubles of the eye.

Heat may be applied in the Dorso-Lumbar Region in diseases attended with cerebral anæmia; the hot stage of intermittent fevers; congestions and inflammations in various abdominal diseases, such as metritis, peritonitis, enteritis, nephritis and cystitis; hæmorrhages: uterine, intestinal, renal, cystic and gastric.

Heat may be applied over the Middle and Upper Dorsal Vertebrae for pulmonary hæmorrhages, congestions and inflammations, except when its action might impede the circulation of the heart and lungs by intensifying an already existing arterial constriction, a condition in which amyl nitrite, sodium nitrite or nitro-glycerine would be indicated. In such cases, heat between the shoulders would be harmful.

Heat may be applied to the Cervical Vertebrae in various congestions and inflammations of organs, glands and other tissues that are supplied by nerve filaments from the cervical sympathetic. *Cold may be applied to the same region* where anæmia or degeneration exists in those organs, glands and tissues.

Where to place the Bags. The ice bag must not reach below the last lumbar vertebra, except in rare conditions to control the nervi-erigentes. A convenient rule is to place its lower end on a line with the crest of the ilia. Thence let it extend to the middle or upper dorsal vertebrae, according to the extent of the lesions. *Cautions.* The bag of ice must be prevented from slipping to the sides lest an annoying cold be developed. It is not well to apply ice immediately after a meal or while freely perspiring. The same care is not needed with the hot water bag, which may be placed at any indicated point along the spine. Don't persist in applying ice when it becomes disagreeable and the patient feels chilled; in such cases suspend the ice and administer laxatives, or apply heat on the same place. Where very rapid action is demanded to constrict blood vessels in the upper part of the body or head and dilate those of abdomen and legs at the same time, the hot water may be placed upon the upper dorsal and cervical vertebrae, while the ice bag is at the same time placed upon the lumbar and lower dorsal vertebrae.

You will be better guided by keeping in mind these statements of Chapman:

1st. "*By the Spinal application of Cold* muscular tension is diminished; sensibility is lessened, secretion is lessened; the peripheral circulation, and, consequently, bodily heat, are increased."

2d. "*By the Spinal application of Heat* muscular tension is increased, sensibility is increased, secretion is increased; the peripheral circulation, and, therefore, animal heat, are lessened."

PAROTIDITIS—MUMPS.

Cotton Batting:—As a covering is all that is usually necessary in simple cases. There should be no counter-irritation. (C.)

Cold Cream or Vaseline:—Is often applied, and may possibly allay the sensation of tension.

Belladonna or Phytolacca ointments:—May be employed in conjunction with the same remedy internally. (Ha.)

PEDICULOSIS.

PEDICULOSIS CAPITIS:

The most expeditious measure is shaving the hair, and the application of some emollient for the eczema, which is usually present. This, however, is only advisable in the case of children and men in hospitals. But it is generally unnecessary, for the proper use of antiparasitics will accomplish the desired end.

The following will prove satisfactory:

Staphisagria:—Much used, and is generally effective. The decoction or tincture may be applied pure, or the fluid extract diluted with vinegar; 1 drachm to the ounce of vinegar. (Al.) Another preparation is made by macerating 1 ounce of the seeds in a pint of vinegar. (F.)

Kerosene Oil:—A remedy suitable for dispensary practice. Saturate the scalp and allow the oil to remain on over night; do this for two days, then wash the head thoroughly with soap and water. It will kill the pediculi but not the nits. In applying the oil avoid letting it run down over the face and neck for fear of causing excoriation.

Vinegar:—Will kill and loosen the nits and therefore should supplement the application of kerosene. (F.)

Cocculus Indicus:—The tincture or decoction, is effective both for pediculi and nits. (F.)

Startin recommended:

Sod. Hyposulphit..	℥ii.
Acid Sulphurosi, Dil.,	℥iv.
Aquæ,	q. s. ad. ℥xvi.

Apply once daily.

The following are useful:

Hydrarg. Bichlorid., grs. iii-v-℥i.

Carbolic Acid, grs. iii-iv, Alcohol, ℥i.

β-Naphthol, 5 per cent. in oil.

When the hair is short, ointments may be employed advantageously, viz:

Hydrarg. Ammon., grs. xx-℥i-℥i.

Staphisagria seeds, in powder, ℥i, Lard, ℥i.

Carbolic Acid, grs. xv-xxv, Ung. Petrolei, ℥i; the last is said to be the most effective.

PEDICULOSIS CORPORIS:

Administer a **Hot Bath** with plenty of soap and boil or bake the clothing. When this is not practicable, iron the seams to destroy parasites and ova. After the bath use inunctions, viz:

Staphisagria:—The powdered seed, ℥ii, lard, ℥i (Vn.), or the oil, ℥i, with ammoniated mercury, ℥iii, lard to ℥i. (T. 96.)

Carbolic Acid:— ȝiii , glycerine, ȝi , water, Oj.

Paraffine Oil:—Said to be the most certain and speedy remedy.

Sulphur:—A small piece about the size of a pigeon's egg may be worn next to the skin night and day. The remedies for pediculosis capitis are also of use in this condition.

PEDICULOSIS PUBIS:

The parts should be washed with soap and water daily and the remedy applied for some days to insure the destruction of the ova. Effective applications are as follows:

Hydrarg. Bichlorid., grs. ii–iv, alcohol or water, ȝi .

Ung. Hydrarg. Oleat., 10–20 per cent.

Ung. Hydrarg. Ammoniat.

Naphthol, 5–10 per cent. solutions. (F.)

The following other agents are also useful (Sm.):
Ointments of Veratrine, Sabadilla Seeds, β -Naphthol, 10 per cent., **Losophen**, 10–20 per cent., **Oil of Rosemary**, **Solution of Creoline**, about 2 per cent.

PELVIC INFLAMMATION.

ACUTE:

In view of the intimate anatomical, pathological, and clinical association of the uterine appendages, and of the similarity of the external remedial measures which are employed for the relief of morbid conditions in these parts, salpingitis, oöphoritis, pelvic cellulitis, and pelvic peritonitis will be considered collectively.

Rest in bed ; Hot Fomentations over the hypogastrium (K. C.), careful antisepsis of vagina, and prolonged vaginal **Douches** of hot water as in acute metritis. (Pz.)

Cold:—In the form of the ice bag, will be found serviceable in some cases. (Dud.)

For the relief of pain small **Blisters** over iliac region, followed by the application of **Morphine** and painting with **Iodine**. The administration of anodyne injections is useful for oöphoro-salpingitis. If an external wound is the source of infection, it should be cauterized. (Dud.)

Operation is advised at the moment sepsis appears, viz: The **Free Opening** into the depth of the inflamed mass, and drainage. (K. C.)

After the acute symptoms have subsided vaginal tamponade should be employed, as in chronic endometritis.

CHRONIC:

Treatment is generally on the same lines as in chronic endometritis and metritis.

Laparotomy:—Pozzi says: "That whatever may be said to the contrary, a laparotomy, or even an exploratory incision, is not justifiable for the mere relief of persistent pain in the vicinity of the appendages." Purulent forms demand surgical interference.

PEMPHIGUS.

The blebs are to be punctured and evacuated as soon as formed and the parts anointed with **Zinc Oxide Ointments**.

Soothing and astringent lotions and dusting powders are indicated, especially the latter. Of the lotions, **Lime Water**, **Thymol**, 1-1000, solutions of **Borax**, **Lotio Nigra** and **Liq. Plumbi Subacetatis** may be used as in acute eczema, and of the powders, **Zinc Oxide** and **Starch**, equal parts, **Bismuth**, **Lycopodium** and **Dermatol** have proved of benefit.

Tumenol:—2-5 per cent. solution applied with compresses has been found valuable, so has an ointment of tumenol oil containing from 5-10 per cent. of the oil, mingled with 5 per cent. oxide of bismuth and oxide of lead, with lard as a base. (F.)

Baths containing **Bran**, **Starch**, or **Gelatine**, and in some cases, the **Continuous Warm bath** as recommended by Hebra. **Corrosive Sublimate** and **Alkaline** baths will also sometimes prove of service. (Pp.) After the baths, dusting powder or ointments may be applied.

Hardaway recommends **Lin. Calcis**, 1 ounce, with **Creosote**, 1 minim.

Unna recommends equal parts of **Linseed Oil**, **Lime Water**, **Zinc Oxide** and **Chalk**, both for drying up and for preventing the formation of bullæ.

Ointments:—Are sometimes useful, as water does not always agree. The following may be used: **Vaseline**, **Rose Water Ointment**, **Lanolin**, with or without 5-10 per cent. of **Zinc Oxide**, or **Bismuth Subnitrate**, or with 3-5 per cent. of **Ichthyol** or **Sulphur**. (Mor.) **Lassar's paste**, **Zinc Oxide** or **Diachylon** ointment. (Ck.)

β -Naphthol:—A 10 per cent. ointment, is useful for the itching.

Euophen:—Used in the strength of 10 per cent., is also effective. (T. 98.)

Ointments should be spread on cloths and bound down with bandages.

Nitrate of Silver:—Grs. ii– $\bar{z}$ i, was employed by Erasmus Wilson after the bullæ had ruptured.

PERICARDITIS.

Prompt treatment is of the greatest importance.

Rest in bed is absolutely essential; under no circumstances should the patient be permitted to leave it. (Gn.)

Hot Applications:—Generally grateful. Poultices tend to relieve pain, and by dilating the superficial vessels drain the deeper. If applied in the usual way they will be too hot, and if of the proper temperature at the time of application they will soon cool, therefore, apply first over the heart a thick flannel and over this the poultice. The heat, which now will not burn, may be maintained for a much longer period. (Gn.)

Morphia and Atropia:—Moderate doses of these remedies associated, administered hypodermically, are very satisfactory for the relief of pain. Morphia, $\frac{1}{4}$ gr.; atropia, $\frac{1}{150}$ gr. (Ty.)

Blisters:—Strongly advocated by some of the most modern authorities, to be applied as soon as diagnosis is made. A blister at least three inches square is to be applied over the præcordial sac. There is no other disease, says Tyson, in which this agent gives more satisfaction.

Cold Applications:—While heat is generally more grateful the ice bag, or Leiter's coil, are effective in some cases, affording great relief and apparently

controlling inflammation. (Gn.) Cold sponging or even the cold pack may be used in cases attended with intense hyperpyrexia. (L. T.)

Paracentesis:—If effusion is considerable, immediate puncture of the pericardial sac must be considered. The puncture should be made in the fourth interspace one inch to the left of the sternum, first carefully dividing with the scalpel the skin and underlying tissues, until the pericardium is reached, then puncture with trocar. When the effusion is purulent free incision may be made, and drainage established, with proper antiseptic precautions. (Gn.)

PERIOSTITIS AND OSTITIS.

(Compare Nodes.)

In the acute forms, **Rest** in bed and elevation of the parts; a few **Leeches** over the inflamed point will do much to relieve pain. This may be followed by **Hot Fomentations** or **Goulard's Solution** with **Opium**. (Hl.)

Compound Mercurial Ointment:—Applied as follows, frequently has a beneficial effect: Spread the ointment on lint and apply it all around the limb. Then straps are firmly and evenly applied from some distance above to some distance below the seat of inflammation; over the whole a starch or gum bandage is placed. Thus pressure as well as the action of the mercury are obtained. (Hl.)

PERITONITIS.

Local measures for the reduction of inflammation do not play a very important role.

Heat:—Most useful in allaying pain and may be applied in the form of hot water bag, flannel wrung out in hot water and covered with oiled silk, or light flaxseed poultices, frequently applied, and covered with cotton and soiled silk. As the hot water bags are generally too heavy to be placed over the sensitive abdomen they can be placed at the sides and assist in keeping the light poultices warm. (Ty.)

Cold:—In the form of compress is preferred by some writers, who claim they do more good than hot applications; they are certainly preferable in some cases. (Rd.) **Ice Bags** may also be used for the relief of pain.

Turpentine:—Stupes are employed for the relief of tympanitis; flannels are wrung out in hot water and sprinkled with turpentine, or equal parts with sweet oil, using about 2 drachms of the mixture, which may be spread on poultices. (L. T.)

Counter-Irritation:—Such as blisters, may be of service in some cases, but only when disease is local and not when the inflammation is general.

Leeches:—Are generally condemned (L. T.), but in sthenic types, in plethoric persons, when the inflammation is localized, they are advocated by some authorities. (Ty.)

Intravenous Saline Injection:—This method has been employed in three cases of septic peritonitis, when death seemed inevitable, with two recoveries. The first case was ruptured intestines from the kick

of a horse; there were well marked symptoms of acute peritonitis, the abdomen was opened and intestines sutured. Three subcutaneous injections (16 oz. each) of artificial serum were made on the next two days, but condition appeared hopeless on third day when two pints of artificial serum were injected intravenously; there was immediate improvement for several days. Three injections of three pints were administered, which caused profuse diuresis and diarrhœa. During one week after the operation nearly 40 pints of artificial serum were given. On the ninth day injections were discontinued and convalescence was well established. The other cases were as follows: Peritonitis following operation for tubal pregnancy, and peritonitis as a sequel of ruptured typhoid ulcer. The former case recovered; the latter died. The injections did not cause either albuminuria or hæmaturia. Occasionally a little pain and dyspnœa occurred, but not of long duration.

The serum used was the following:

Chloride of Sodium,	75 grains.
Sulphate of Sodium,	150 grains.
Distilled Water,	1¾ pints. (T.97.)

TUBERCULAR PERITONITIS:

Simple Incision with Free Evacuation:—Most successful of any of the measures employed; the best results were obtained when the abdomen was neither flushed out nor drained, but when the effusion had been simply evacuated and the wound closed. (T.97.)

Collodion:—Several cases have been reported by French physicians in which repeated applications to the abdomen over its entire surface have been followed by recovery. (Sm.)

PERNICIOUS MALARIAL FEVER.

A reaction should be brought about at once. If in the cold stage, apply **Heat** to the surface. When there is cerebral congestion **Cold** to the head. Cold is contra-indicated if the face is pale. Remissions are greatly promoted by the free and frequent use of **Hot Mustard Foot Baths**. (Rd.) (Ga.)

Quinine:—Hypodermically, is advised in all varieties of pernicious intermittents; the patient should be cinchonized and kept so for several days. (An.)

The soluble salts should be used, such as the tannate, hydrobromate and hydrochlorate, in doses of 15 grains in distilled water, with 1 grain of sodium chloride. The bisulphate in doses of 30 grains, with 5 grains of tartaric acid, may also be given. The muriate of quinine and urea, in doses of from 10–20 grains, may also be administered. These doses may be much increased if necessary. The liability to the formation of abscesses after the hypodermic administration of quinine must be taken into consideration. (Ty.)

Amyl Nitrite:—Inhalation may modify the cold stage, but has no influence on the hot.

PERTUSSIS.

Of the numerous agents used specially for their germicidal and antispasmodic effects, the following may be commended:

Carbolic Acid:—A solution of 5–1000, as a spray, seems to be valuable, and is much used. (Ty.)

- A form of the crude acid is sold under the name of **Cresolene**, the vapor of which is allowed to impregnate the apartment. The remedy is prepared for vaporization by heating, and it is thought to modify the disease.

Resorcin:—One per cent. solution, applied to larynx, is very effective. (T. 98.)

Hydrogen Peroxide:—Is the best and least irritating antiseptic applicaiton for this disease. It should be sprayed directly into larynx two or three times a day, in the strength of 30 volume peroxide (hydrozone), 1 part; distilled water, 10 parts; glycerine, 1½ parts. Hydrogen peroxide is also used diluted with 2 parts Dobell's solution. It is discountenanced by Goodno.

Menthol:—20 grs. in liquid vaseline in an ordinary nasal spray, as soon as paroxysm begins, or seems impending. Diffuse a fine cloud of spray in front of the face, the spray being held about two feet away. The effect is beneficial, the paroxysm soon over, and mucus rapidly expectorated.

Boric Acid:—Insufflation of 3 grains into nose every three hours. (Sn.)

Nitrate of Silver:—Used as a spray in 1–2 per cent. solution (Jac.). It stains clothing, however, and is not applicable to young children.

Chloroform or Ether Inhalations:—Preferably the former, are very beneficial when convulsions have occurred, or are feared; also the following combination:

Chloroform,	℥j.
Ether, Sulphuric,	℥ij.
Ess. Terebinth, Rect.,	℥iiss.

Pour a teaspoonful upon handkerchief, and hold to child's nose during paroxysm. (Sn.)

Hydrarg. Bichlorid.:—Sprays of 1–4000 solution

(Ty.). Caution evidently necessary, as to frequency of application and quantity applied. Rabinschek's method (B. M. P., 8, 13, 96); consisting of the introduction into the back of the mouth of a small tampon saturated with a solution of 1-1000, which is pressed against the base of the tongue, so as to enable the solution to bathe the epiglottis and neighboring parts, is said to be efficacious; but, inasmuch as in a small number of cases temporary disturbances have been observed, such as hæmorrhages of the conjunctiva and the ear, buccal ulceration, and slight fever (which were described by the author as not at all serious), this method of treatment would scarcely seem to be advisable.

Thymol:—Inhalations are sometimes serviceable. A good formula is as follows:

Menthol,	
Thymol,	
Carbolic Acid,	āā grs. v.
Oil of Eucalyptus,	℥ ii.
Oil of Pinus Sylvestris,	℥ iii.

A teaspoonful to about a pint of boiling water or a few drops on cotton, inhaled. (F.)

Sodium Sozoiodate:—The powder blown into the nose in doses of 3 grs. daily is said to be effective. (F.)

Ozone:—The sick room may be charged with the gas in moderate quantities with benefit, improving the condition of the patient, and minimizing contagion. (F.)

Poultices:—Large enough to cover posterior surface of lungs; on this the child is made to lie for one hour. Relief is almost immediate. After removal, rub in skin previously covered by poultice sweet oil and camphor then apply cotton jacket. (Sj.)

Asparol:—1 per cent. aqueous solution applied on gauze over periglottal region. (Sj.)

Carbonic Acid Gas:—Inflation of rectum with this gas has been attended with success. (F.)

Formaldehyde:—Is used successfully as a spray three times daily for fifteen minutes at a time. (F.) Inhalations are also recommended, the patient is propped up, and the spray is applied within this wrapping for two or three minutes. The paroxysms are diminished, both in frequency and intensity. (Sj.)

Cocaine Hydrochlorate:—A 5 per cent. solution to the pharynx. (Jac.)

Amber Oil:—Useful as an embrocation, enters into the combination of a well known English nostrum called "Roche's Embrocation," which is composed of olive oil mixed with half its weight of oil of cloves and oil of amber. (Cool.)

Sulphur Fumigations:—Of sleeping apartments have given good results. Remove the child from the room in the morning, wash and dress in clean, fumigated clothing; then close room to be fumigated for four or six hours, allowing sulphur to be freely burned in it. (Gn.)

Eucalyptol:—The fumes as an inhalation, or a spray as follows: 2 drachms of the oil with 2 of terebene, and alcohol $1\frac{1}{2}$ oz.; apply half an hour before each meal, and at bed time. (F.)

Quinine:—Insufflations have been employed, and considerable doses have been given to be slowly swallowed for their topical effect. Sprays were formerly much employed.

PHAGEDÆNA.

(See also Gangrene.)

Nitric Acid:—The foremost topical remedy steeps the effected part with the fuming acid; if ulceration is extensive, chloroform may be administered.

Bromine:—In using this agent it should be remembered that it is one of the most powerful escharotics, its action being not altogether controllable. It causes widespread destruction of the tissues which are slow to heal. Its use in the pure state is mostly confined to hospital gangrene. An aqueous, $\frac{4}{10}$ per cent. solution, is employed for washing phagedenic wounds. All disorganized tissues should be first removed by hydrogen peroxide irrigations, the scissors and forceps. Then irrigate with the bromine solution. If gangrene is extensive, pure bromine may be used, the patient being under an anæsthesia. Compresses wet with the bromine solution are placed over the wound, covered with oiled silk, and a bandage. Dressing should be changed every twelve to twenty-four hours for the first two to four days, when the granulating surface should be clean. Then change to simple sterilized water dressings, or one containing 1 per cent. of sodium chloride, or 5 per cent. of boric acid. (F.)

Carbolic Acid:—The undiluted acid is superficial in its effects, but will be found very useful in mild cases. (N.)

Potass. Chlorate:—The powder thickly sprinkled over sore, proves a manageable and effective remedy. (B.)

Hydrated Silica:—This substance is a jelly-like mass and is prepared by Dr. H. G. Piffard according to a process devised by Dr. C. Rice. It is said to be most effective in controlling profuse suppuration.

The silica is packed closely in the part, and the dusting renewed once or twice a day. If applied too long it will devitalize the tissues and cause extensive sloughing. (F.)

Pyrogallic Acid:—A powder made of one part of the acid with four of starch has been found effective. (F.)

Mercuric Nitrate:—A useful caustic; its especial value is its speedy destruction of rapidly advancing ulceration. (F.)

Zinc Chloride:—This powerful caustic may be dusted, in the form of a powder, over the ulcerating surface. A superficial slough forms, which may be removed by poultices. (B.)

Salicylic Acid, Boric Acid, Europhen, Iodoform, and Xeroform, applied to the sloughing surfaces and adjacent healthy tissues, are all effective when dusting powders are indicated.

Immersion in Hot Water:—As recommended by Mr. Hutchinson. The part is placed in a bath at a temperature 95°–98° and allowed to remain for eight hours at a time. After two or three baths a healthy appearance may be looked for. This method is said to have been very successful in the treatment of phagœœna of venereal sores.

Cauterization:—By the galvano-cautery or Paquelin, preferably the former, will sometimes arrest the morbid process when other measures have failed.

For cleansing and deodorizing, solutions of **Hydrarg. Bichlorid.**, 1–2000; **Hydrogen Peroxide**, pure

or diluted; Carbolic Acid, in various strengths; Potass. Permang., about 5–10 grains to the ounce, and Labarraque's solution.

PHARYNX, ADENOID GROWTHS.

(Hypertrophy of the Pharyngeal Tonsil.)

Mild treatment should be tried first. The following are of service: Sod. Benzoat, grs. x- $\bar{z}$ i; Potass. Chlorat., grs. xx- $\bar{z}$ i; Dobell's Solution, or either of the following formulæ:

Fld. Ext. Hamamelidis, Destill.,	
Aq. Rosæ,	āā $\bar{z}$ ii.

Or,

Listerine,	$\bar{z}$ iv.
Sod. Bicarb.,	
Sod. Biborat.,	āā grs. viij.
Aq. Rosæ,	q. s. ad. $\bar{z}$ iv. (Bn.)

Tannin:—One of the best applications, a solution of 40 grs. to the ounce of glycerine, painted on with a suitably curved post-nasal applicator, after the use of sprays (B.); or the following combination:

Acid. Tannici,	grs. xl.
Acid. Carbolici,	•gr. j.
Sodii Biboratis,	grs. xx.
Glycerini,	$\bar{z}$ ss.
Aquæ,	ad. $\bar{z}$ iv.

This may be applied twice daily.

(Bos.)

Resorcin:—100 per cent. solution has been used successfully, one observer declaring that it obviates the need of surgical measures. The time required for treatment, however, was from two to four months. (T. 98.)

When milder measures fail, chromic acid, the galvano-cautery, the curette, or forceps should be employed for the removal of the growths. (Iv.)

Chromic Acid:—May be applied on a probe in the form of the fused crystals or in a saturated solution, preferably the former. Applications should be guarded, and the rhinoscopic mirror used. Three or four applications may be made at weekly sittings, the saturated solution on cotton being used. Care must be exercised lest the acid flow down the throat and cause severe inflammation and spasms. (Iv.)

Galvano-Cautery:—Among the most efficient methods of treatment, a good practice is to burn away two or three prominent nodules at each sitting, repeating the operation in a week or two if necessary. This method, however, is not adapted to children. (Bh.)

Curettage:—For this purpose employ Meyer's method, an L shaped curette, finger curette, or the finger nail; general anæsthesia and antiseptics also are necessary. Some writers regard this measure as peculiarly dangerous, and only to be performed by an expert. It is not adapted for use with children.

Curved cutting and crushing Forceps are used to tear away the growths. The hæmorrhage is quite profuse for a time, but soon subsides.

Supra-Renal Extract:—The recent introduction of this agent for operations on the nose and throat is apparently only second in importance to that of cocaine. It is a powerful vaso-constrictor and contractor of erectile tissues. By its use it is said that nose and throat operations can be greatly facilitated and rendered almost bloodless.

Its blanching properties are very powerful; a drop

of a 1 per cent. solution instilled into the eye will produce, it is claimed, an ivory whiteness of lid and conjunctiva in less than one minute. It is painless and non-reactionary. A tolerance is not established by its use and there does not appear to be any danger to the tissues or the individual. Such at least are the claims. The remedy also has been used mixed with cocaine.

PHARYNGITIS.

ACUTE CATARRHAL PHARYNGITIS:

Many simple cases disappear without treatment. Twenty-four hours in bed is about the best medicine. Local applications, when required for the comfort of the patient should be astringent and soothing. They may be administered in the form of sprays, gargles or inhalations. Gargles are of utility if used according to the method of Hagen, otherwise the fluid rarely passes beyond the pillars of the fauces. Hagen advised that the mouth be a little more than half filled with the gargles, the head bent back, the mouth open and a complete act of deglutition performed with the mouth still open; the air is now allowed to gargle through the solution as long as possible, and then it is expelled. (Iv.)

The following are for use as gargles or sprays in solution with 1 ounce of water:

Potassium Chlorate, grs. x-v.

Sodium Biborate, grs. x.

Sodium Bicarbonate, grs. viii.

Alumin, grs. v.

Tannic Acid, grs. v.

Rhus Glabra:—Said to be one of the best remedies as a gargle; use 2 drachms of the fld. extract to 4 ounces of water, to which 2 scruples of Chlorate of Potash have been added. (Al.)

Fluid Petroleum Preparations:—Such as benzoin, albolene, etc., are often very soothing when applied in the form of sprays.

Tannic Acid:—15 grains to 1 ounce of water, is of service when there is œdema. (Iv.)

Menthol:—An agreeable application, has positive value in controlling inflammation. Sprays of from 2-5 per cent. are agreeable and effective palliatives.

Lozenges:—Are often of service in allaying the irritation of the throat; the following are recommended, the latter being indicated when there is considerable secretion which is not easily expectorated (Bos.):

Ext. Eucalypt.,	3 ss.
Sod. Biborat.,	grs. x.
Pulv. Piment.,	grs. vii.
Ext. Glycyrrhiz.,	3 iiss.
Ft. Mass. in trochisca, No. xxx div.	
Ammon. Muriat.,	3 ss.
Pulv. Ipecac.,	grs. ij.
Pulv. Capsici,	gr. ss.
Ext. Glycyrrhiz.,	3 iiss.
Ft. Massa in trochiscas No. xxx.	

The following in solution with 1 ounce of water:

Acetanilid, grs. iv.

Tr. Capsici, gtts. iii-iv.

Tannate of Glycerine, ʒi.

Gallic Acid, mixed with Tannic in proportion of 1-3, said to modify irritating effects of the latter; about 5 grains of the mixture to 1 ounce of water.

Hamamelis, Aqueous Ext., about ʒiiss. (Sn.)

Thymol:—Solution of 1-1000-2000, is especially

valuable in exanthematous variety. (Al.) (See Scarlet Fever.)

Inhalants:—Are sometimes effective in soothing the irritation; the following are suggested:

Benzoic Acid, 3 grains with 12 grains of Kaolin; rub well together and add Tr. Tolu, 18 drops, and water, 1 ounce. Add one teaspoonful to a pint of hot water and inhale vapors. (Lefferts.)

Thuja, a few drops of the essential oil in a pint of water, temperature 140°. (Al.)

Chamomile, infusion is useful for children. (Al.)

Cold:—Ice water compresses to the throat or small ice bags with dry towels covering; also sucking small pieces of ice.

Counter-Irritation:—Mustard leaves sometimes better than cold, as all throats do not bear cold equally well. (Ty.)

Scarification of Uvula:—When the uvula is very oedematous and elongated, it is the source of constant irritation, and discomfort, in which condition scarification or puncture will afford prompt relief. (Pp.)

CHRONIC CATARRHAL PHARYNGITIS:

This condition is usually secondary to some other affection, such as naso-pharyngeal catarrh, obstructive lesions of the nose, excessive use of tobacco, or chronic gastric catarrh. Treatment, therefore, should be directed toward eliminating these causes; at the same time, local application should be made to the pharynx every two or three days.

The throat should first be cleansed with some antiseptic or alkaline spray, such as **Dobell's** or **Seiler's Solution**. This constitutes a very important meas-

ure. After cleansing, the selected remedy may be applied; the following solutions will be found of service:

Potass. Bichromate, 1 per cent.; **Potass. Permang.**, 1 per cent.; **Sodium Bicarbonate**, 5 per cent.; **Eucalyptus**, 10 per cent.

When the above have failed, one of the following, combined with 1 ounce of **Glycerine** is used, **Tannic Acid**, grains 10; **Zinc Chloride**, grains 5; **Iodine**, grains 10. (Iv.)

The following are also recommended: **Argent. Nit.**, grains 10-20 to the ounce; **Zinc Sulphate**, grs. 10-20 to the ounce; **Liq. Ferri. Persulph.**, M. x to the ounce.

Pyoktanin Blue:— $7\frac{1}{2}$ grs. with 2 drachms of water; 10 minims of this solution with 1 ounce of glycerine; apply with brush, especially when hypersecretion is a prominent symptom. (Iv.)

Glycerine:—Painting the throat is of value, as this agent depletes the mucous membrane. (Gn.)

Cold Salt Water:—As a preventive; bathe neck and upper part of chest with cold salt water, and afterward rub with rough towel; avoid muffling neck.

CHRONIC FOLLICULAR PHARYNGITIS:

Galvano-Cautery:—While there is some divergence of opinion in regard to the expediency of destroying the enlarged follicles by cauterization before employing milder measures, it seems to be the generally approved method for the cure of this affection. The best agent to employ is the electro-cautery. Each follicle is touched with the needle once, and, in the case of very large follicles, several times. The needle should be fine and brought to a red heat. It is

advisable to go over the pharynx at intervals of a week until inspection shows all enlarged glands to have been eradicated.

While many writers consider the above the only satisfactory treatment, other and milder measures are recommended and approved. Some of these are as follows:

Nitrate of Silver:—Solutions of 40–60 grains to the ounce, have been employed after the removal of the mucus. The hypertrophied tissues are to be touched individually. Another method of application consists in splitting the follicle with a knife, and crowding in the silver. (Ing.) The knife and caustic may be advantageously employed when the cautery is not available. (L. B.)

Curettage:—Recommended by Lennox Browne in obstinate cases.

Hydrastine:—By insufflation, is indicated in cases where the follicles are of a deep red color, where the surrounding mucous membrane is moist and the secretion, except in the naso-pharynx, is not excessive; use hydrast. muriat., grs. xxv; acaciæ, q. s. ad grs. c. At first use small quantities only in order to ascertain susceptibility of patient, as remedies applied in this way sometimes cause pain. (Ing.)

Astringent sprays of Cup. Sulph., Zinc Chloride, Zinc Sulphate, 10–20 grs. of either to water 1 ounce, will occasionally prove useful. (Ing.)

Pyoktanin Blue:—Saturated solutions applied to each follicle are recommended. (Gn.)

Iodine:—A solution in glycerine. (Gn.)

Mineral Cauterants:—The following may be employed when follicles are much enlarged: **Nitric Acid**, **Chromic Acid**, and **London Paste** applied carefully to

each follicle individually. These caustic applications may be repeated in four or five days. (Ing.) **Zinc Chloride**, 20–40 grs. to the ounce, is also applied to the indurated tissues. These measures, for the most part, are now obsolete.

Krameria:—Will form a mild troche; useful as a palliative astringent, about 3 grains to a troche, or the following in each:

Ext. Krameria,	gr. i.
Pulv. Cubebs,	gr. $\frac{1}{4}$.
Potass. Chlor.,	grs. ii. (Ing(.

PHLEBITIS.

Rest in bed constitutes the first essential of treatment. The affected part should be elevated if possible and enveloped in cotton.

Ice applications should be applied to the parts when the temperature is high. (Gn.)

Hamamelis:—Applied on compresses acts well. (Rd.)

The following anodyne preparations are recommended:

Ext. Belladonnæ,	
Ext. Hyoscyami,	āā grs. xxx.
Adipis Benzoat.,	℥i.

Or,

Chloroformi,	
Līn. Camphor.,	āā ℥ii.
Glycerini,	℥iv.

Or,

Ichthyoli,	grs. xv.
Lanolini,	℥j.
	(T. G., 9, 15, 96.)

Goulard's lotion with Opium:—A useful anodyne lotion. (Hl.)

Free Incision:—Is indicated, if suppuration ensues; the incisions are made parallel to the veins, and free drainage established. A wet dressing should be applied, and the wounds freely irrigated with sublimate solution 1-1000. (W.)

PHLEGMASIA ALBA DOLENS.

(See Phlebitis.)

PITYRIASIS CAPITIS.

Treatment of this affection is chiefly local. Before the application of any remedy first clean the scalp with soap and water, or if the crusts are very thick soften them with olive oil and then shampoo the head with **Spts. Sapo. Kal.** According to Hebra, this remedy is made by dissolving 2 drachms of the green soap in 1 ounce of alcohol; perfume if desired with oil of lavender, or bergamot. Apply the soap with water, a teaspoonful with a tablespoonful of water, well worked up into a lather, and quickly clean the scalp. Afterwards cleanse with cold water and apply the selected remedy. In ordinary cases where the scales are loose and dry, remedies may at once be applied, such as the preparations of resorcin, sulphur, and salicylic acid.

Lotions are generally best when the hair is thick; ointments are useful when it is thin. The following are well attested formulæ:

Resorcin:—Gives excellent results, useful in obstinate cases, and in those in which there is considerable effluvium capillorum, viz:

Resorcin.,	℥iv-℥ii.
Ol. Ricini pur.,	℥iv.
Alcohol fort.,	℥v.
Balsam Peru,	gtts. xii.

Rub in scalp once or twice daily.

Or,

Resorcin.,	grs. x-xx.
Sulphur. Præcipit.,	℥i.
Ung. Aquæ Rosæ <i>vel.</i> Ung. Simp.,	℥ij.

Rub in scalp once or twice daily.

If resorcin is used alone it should be dissolved in a bland oil. (B. H.)

Salicylic Acid:—Dissolved in water, forms a useful lotion for cases in which desquamation is a most marked feature. (F.)

Thymol:—In the following lotion, can be used freely:

Thymolæ,	℥i.
Liq. Potassæ,	f ℥i.
Aq. Laurocerasi,	Oj.

Apply daily.

(Vn.)

An ointment of 10 per cent. and upward is also used. When one stronger than 20 per cent. is desired, the thymol should first be dissolved in alcohol. (F.)

Carbolic Acid:—The following combination is to be preferred when the hair is thick, to be applied after washing with the green soap:

Acid. Carbolicæ,	℥i.
Alcohol, seu. Aq. Cologniensis,	℥iss.
Glycerini,	℥iiss.
Ol. Limonis,	℥iss.

A few drops of this mixture are applied here and there over the surface by means of an eye dropper, and rubbed in well with a stiff brush. The mixture may be scented if desired. Apply daily.
(Vn.)

Oleum Rusci Crudum:—Excellent as a lotion or pomade. The lotion is as follows:

Ol. Rusci Crud.,	gtts. xv- $\bar{3}$ iiss.
Ol. Ricini pur.,	$\bar{3}$ j- $\bar{3}$ ii.
Ol. Bergamot.,	
Ol. Citronelli,	$\bar{a}\bar{a}$ gtts. xv.
Æther. Sulphuric.,	$\bar{3}$ ii.
Alcohol, Fort.,	q. s. ad. $\bar{3}$ vii.

Apply daily with brush.

The pomade:

Ol. Rusci Crud.,	$\bar{3}$ ivss.
Vasellini Alb.,	$\bar{3}$ vss.
Paraffini,	$\bar{3}$ i.
Ol. Bergamot,	$\bar{3}$ iss.
Ol. Citronelli,	$\bar{3}$ ii.

Rub in scalp, with finger.

These preparations will remove the scales and improve the functions of the glands to the extent, it is said, of restoring the hair (B. H.):

Resorcin and Salicylic Acid:—May be combined advantageously in the proportions of 24 grains of each, and saponated glycerine 1 ounce. The base should be melted, the salicylic acid first incorporated, then the resorcin at a lower temperature; this is said to form an excellent application, acting both as a soap and as an ointment. (Al.)

Sulphur:—Unna recommends as the best line of treatment the application of an ointment made up of 1-3 parts of sulphur to 30 of simple ointment. The head should be first washed with **Green Soap**, and the ointment then applied by an attendant twice

a week. When there is much falling of the hair from 2–10 per cent. of **Tincture Cantharides** may be added.

Pyrogallic Acid:—1 drachm to the ounce has been used with great benefit, applied at night and washed off in the morning with a little soap spirit. Then follows in most cases a little discoloration.

In more chronic cases :

Zinc. Carbonatis pur.,	℥ iv.
Glycerini,	
Ol. Cadini,	āā ℥ i
Cerati Galeni,	ad. ℥ viii.

Rub firmly into surface night and morning; oftener if itching is present. (And.)

The following is recommended by Vigier :

Hydrarg. Sulphat. Flavæ,	grs. xlv.
Vaselini,	℥ xv.
Ess. Limonis,	gtt. xx.

Keep in porcelain jar. Apply at night and wash off in the morning.

Creosote:—Recommended by Tilbury Fox in the following formula :

Creosoti,	M xxx.
Glycerini,	℥ iii.
Aquæ,	℥ v–viii.

Borax:—2 drachms to the ounce of glycerine is frequently serviceable. (Kp.)

PITYRIASIS VERSICOLOR.

Tilbury Fox recommends the following measures as being effective :

A Hot Bath taken for 3 nights in succession, the skin

being vigorously scrubbed, either with cheap yellow soap, or preferably **Sapo Viridis**, friction of the skin being maintained with a flesh brush. The affected area is then moistened with **Vinegar** and water, or **Dilute Acetic Acid**, after which it is to be well sponged with a solution of **Sodium Hyposulphite** ʒi-ʒi. The eruption usually fades after the third bathing; should there be a recrudescence, it must be attacked with solution of **Corrosive Sublimate**, grs. i-ij-ʒi. (Hy.)

Vlemingckx's Solution:—Diluted from 3-6 times, forms an excellent application.

Tr. Iodine:—Painted on the part often acts well. (F.)

Sulphur Baths:—Combined with **Mercurial Lotions**, are used by McCall Anderson.

Black Soap:—Is useful for scrubbing the skin in hospital practice, a substitute for which in private practice is the following:

Hydrarg. Perchlor.,	ʒj.
Sapo. Virid.,	ʒ ii j
Spts. Rect.,	ʒ ii.
Ol. Lavandulæ,	ʒj. (And.)

Scrub skin night and morning; caution regarding absorption of mercury. (And.) Leloir modifies the above formula by adding one more ounce of green soap, and twice the quantity of rectified spts. (T. C., Vol. V.)

The following is recommended by Brocq:

Salicylic Acid,	2-3 parts.
Precipitated Sulphur,	10-15 parts.
Lanoline,	70 parts.
Vaseline,	18 parts.

The following combination, by Besnier, acts well:

Resorcin,	
Salicylic Acid,	āā grs. v-xlv.
Precipitated Sulphur,	℥ss.
Lanoline,	
Vaseline,	
Lard,	āā ℥vj.

Sulphurous Acid (pure or dilute); **Carbolic Acid** ($\frac{1}{2}$ –2 per cent. solutions); **Hydroxylamine Hydrochloride** (1 grain with an ounce each of alcohol and glycerine); **Hydrargyrum Sozoiodate** (a 10 per cent. solution in water); **Quinine** (5 per cent. ointment); **Wilkinson's Ointment**, and the other parasiticides employed in the treatment of ringworm of the body, are all well attested remedies.

The underclothing should be cleansed frequently, and not worn after treatment until they have been thoroughly boiled in hot water.

PLEURISY, ACUTE.

Poultices:—Large, hot and frequently applied, are generally grateful to the patient. (Gn.)

Laudanum:—May be poured on poultices, or **Morphine** administered hypodermically.

Adhesive Plaster Straps:—Arranged so as to restrain the respiratory movements, as in fracture of the ribs, will, if properly applied, afford much relief. The plasters should be about $2\frac{1}{2}$ inches wide and the application should be made after expiration. (Gn.)

Ice Bags:—Advised by some, but the majority of patients find hot applications more grateful. (F.)

Blisters:—May be employed in the earliest stage to limit inflammation, and later, in stage of effusion,

to promote absorption. In the latter instance they should be applied some little distance from the seat of dulness. (F.)

Sinapisms:—Are often helpful; the following is recommended :

Pulv. Sinapis,	℥ ss.
Pulv. Lini,	℥ viii.
Aq. Bullientis.,	q. s. (Sn.)

Guaiacol:—Useful in the stage of effusion to promote absorption.

Guaiacol.,	grs. xlv.
Tr. Iodi,	
Glycerini,	each ℥ v.

Paint over posterior portion of thorax. Reaction appears in about four hours. (Sj.)

Olive Oil:—A recent method for dry pleurisy and pericarditis consists of the injection of sterilized olive oil, 15–45 minims, over the point of friction murmur. It is not painful. (Sj.)

In the latter stages, little is gained by external applications, except for relief of pain.

Large effusions should be treated by **Aspiration**, the indications for which are :

“1. Distension and pressure dangerous to life.

2. Subsidence of fever and other active symptoms, but no decrease in the effusion.

Paracentesis is sometimes rapidly curative, as well as palliative; therefore tap in delayed absorption, even if no urgent symptoms are present.” (Gn.)

PLEURODYNIA.

(See Muscular Rheumatism.)

PNEUMONIA—ACUTE, CROUPOUS.

There is considerable diversity of opinion in regard to the utility of external therapeutic measures in this disease. "Pneumonia jacket," heat and cold, in various forms, are all advocated. Goodno, who recommends protecting the chest with a simple layer of flannel, says: "That as good results are claimed for all, it may be concluded that none are especially valuable." The truth or error of such a conclusion is still to a certain extent an open question.

Dry Cupping:—Applied to the chest is often of service in the early stages. After the application of half a dozen cups, a patient previously unable to lie down, owing to the dyspnœa, will assume the recumbent position and fall asleep.

Sinapisms:—Are useful for the pleuritic pains.

"Pneumonia Jackets:"—These are much in use, especially in England and in this country. They may either consist of loosely quilted cotton jackets or, what is preferable, a piece of oiled silk cut out so as to fit the chest. Over this a layer of cotton batting is placed; the jacket is then applied, the cotton batting, of course, next to the skin. The jacket, or more correctly the layer of cotton and oiled silk, is pinned over the shoulders and down the front of the chest with safety pins. Before applying the jacket, a good many smear the cotton batting thickly with a mixture of **Turpentine and Vaseline**, which, acting as a mild counter-irritant, is generally grateful to the patient.

Poultices:—Hot flaxseed meal poultices enveloping

the whole chest have, with good reason, gone out of use. Whatever good results they may have had they were more than compensated for the evils of inconvenience of application, requiring, as they do, frequent changing, discomfort, disturbance, and exposure of the patient. Small poultices are, however, of benefit when applied over circumscribed areas for the relief of pleuritic pains. When the jacket is used, a small poultice over the surface of which laudanum may be poured for its anodyne effects, may be slipped underneath the edge and placed over the painful part, which is usually on the side and convenient of access. It should, however, not be lost sight of that if heat is too great between the shoulders it intensifies the constriction of the arterioles. (See Chapman's Spinal Ice Bag Treatment under Paralysis.)

Cold Applications:—These have lately been gaining favor. The method of Baruch is as follows: Envelop the chest in a suitably fitted linen or cotton jacket wet with cold water. The jacket should be removed and a fresh, dry one substituted whenever the temperature falls to 100° , and removed if it rises; in this way, it is claimed, all danger is averted. Dr. Mays, of Philadelphia, prefers to surround the affected area with ice bags wrapped in towels, but they are difficult to keep in position.

Ice over the præcordial region is recommended as a refrigerant and cardiac stimulant in children. (Jac.)

Excellent results from the use of **Cold Compresses** are reported by Dr. W. F. Jackson, of Brockville, Ont. He claims lowering of temperature, quieting of the circulation, relief of pain, and promotion of general bodily comfort. Dr. T. I. Mays reports a death rate of 2.7 per cent. out of 74 cases in which cold water treatment had been tried. (T. 96.)

To avoid venous stasis, patient's position may be changed every hour, and not permitted to remain long on back. (Sj.)

The cold compresses used for adults cover the back and front of the chest; they are wrung out in water at a temperature of 60°, and refreshed every half hour, according to case. A higher temperature may be used if there is much jactitation and excitability. Cold water may be first dashed in the face if there is much delirium. Not a little of the benefit of cold compresses is due to their tonic effect upon the nerve centres, and to relieving the cerebral congestion by dilating the surface capillaries. (T. 98.)

Ice Cradling:—The following method is described by Dr. P. B. Smith (Brit. Med. Journ., May 11, '95). The patients were placed in bed and over the body and legs two large cradles were arranged extending from the shoulders to the feet. Six or eight small pails filled with ice were attached to the arches of the cradles. A thermometer was also attached to the upper part of the cradle, which was then covered with a blanket, then with a water proof, and lastly with the ordinary covering. The pails were kept filled with ice, and the temperature under the cradles of the ward and of the patient was taken every four hours. The temperature of the air under the blankets was also taken before the cradles were arranged. This treatment was maintained until the patient's temperature became normal. Dr. Smith's reports say that the cases upon which this method was employed were those of acute sthenic pneumonia. Out of 108 cases treated by sponging and ice cradling, 10 per cent. died. The patients, as a rule, were said to feel comfortable, but one or two complained of

cold feet. Dr. Smith concludes from the results of his investigations that ice cradling is suitable as a mild antipyretic treatment in sthenic cases. It is easily applied and not violent in its effects.

Dry Heat:—Dr. C. W. Ingraham has adopted a method of applying heat by an apparatus for the circulation of hot water through coils of rubber tubing, so arranged as to cover the whole chest. (N. Y. Med. Journ., May 18, 1895.) Excellent results are claimed for this method, although its application appears to have been limited.

Cold Baths:—In the case of children, the tub can be employed, but for adults compresses are preferable. When tubing is administered begin with a temperature of 95°, and gradually lower according to indications; continue for about ten minutes, and repeat every three or four hours. (S. B.)

Cold Packs:—Generally preferred by Jacobi, in infantile pneumonia, with hyperpyrexia. Wrap the child in a wet towel, and cover with a blanket. In urgent cases this may be replaced by another every two or five minutes. When frequent changes are undesirable the wet towel may remain and the surface rubbed with ice. If the temperature is reduced rapidly heat must be applied. Feeble and anæmic babies do not bear cold well. When the heart is weak and extremities chilly, cold bathing is contra-indicated. (Jac.)

Hot Baths:—Also used in infantile pneumonia. They are indicated in cases with high fever; when the patient is feeble or anæmic, and when the circulation is poor, with cold surface and high rectal temperature a hot bath under these conditions will act beneficially. (Hlt.)

Tepid or Warm Packs:—With alcohol, or a tepid

bath, gradually cooled, with friction constantly applied, may be employed in anæmic children. (Jac.)

The general indications for the use of cold and heat in croupous pneumonia may be briefly summarized as follows: In robust persons with full strong pulse, with continued hyperpyrexia, cold may be employed; in patients of a less vigorous constitution and in those who are feeble and anæmic employ heat, especially when the surface is cold and heart weak, conditions which decidedly contra-indicate cold. Thus the employment of the powerful agents call for a careful study of each case. The "pneumonia jacket" with small anodyne poultices for the relief of pleuritic pain are the methods generally adopted.

Methyl Chloride:—Has been used to relieve localized pain; applied along the course of the nearest nerve, is said to afford instant relief. (Sj.)

Blisters:—Sometimes claimed of service, especially in delayed resolution. (Ty.)

Oxygen Inhalations:—Are of undoubted value in relieving the dyspnœa. (Ty.)

Artificial Serum:—Injections have been used after the method of Galvagni, a solution of chloride bicarbonate of sodium being employed. The report is generally favorable, though, as yet, the treatment is too recent and the experiments too limited to warrant any very definite conclusions or recommendations. Subcutaneous injections are said to have benefited, while intravenous aggravated the condition.

Serum Therapy:—Remarkable clinical results are claimed by both Klemperers, Fowlinsky and Emerich, with anti-pneumococci serum. The serum treatment has not been more generally adopted in

pneumonia on account of the difficulty of obtaining the serum from immunized rabbits. Whatever may be the value of serum therapy, it has not yet passed beyond the stage of experimentation.

POWDER STAINS.

Stains due to gun powder may be removed, according to Shoemaker, by first washing with equal parts of **Binioidide of Mercury** and **Distilled Water**; this causes the spots to become red. Then apply **Dilute Hydrochloric Acid** and the red stains will disappear. (Sh.)

PROCTITIS.

The patient should be confined to bed and any scybalæ, if present, must be cleared away by injections.

Cold Water Injections, and the application of **Cold** to the anus, will usually be sufficient for mild cases. (Gt.)

Hot Water Injections:—May be employed in place of cold, and are generally more grateful. (Bt.)

Anodyne Injections:—About 2 ounces of mucilage of starch, with a few drops of **Laudanum** (Tre.), or decoctions of **Althea**. (Al.)

Suppositories of Iodoform, grs. v.; **Ext. Belladonna**, gr. $\frac{1}{3}$, are very useful. (Tre.)

Antiseptic Injections:—Are of great service, especially if the disease is specific, viz: Solutions of **Boric Acid**, **Hydrarg. Bichloride**, 1–10,000 (not stronger); **Carbolic Acid**, 1–100.

Nitrate of Silver:—If the disease does not yield, weak solutions of grs. ss- $\bar{z}$ i may be injected, increasing the strength later four or five times as indicated. (L. T.) A solution of 5 grs. to the ounce, painted on through the speculum, is recommended in chronic forms, or as an injection in the strength of grs. iii- $\bar{z}$ i. When the disease is extensive the latter should be followed by copious injections of warm water. Applications as injections should not be made more frequently than every third day. (K.)

Astringent Injections:—These are useful in chronic forms. In addition to nitrate of silver, the following are employed when the discharge is very fetid:

Liq. Bismuth,	$\bar{z}$ ii.	
Glycerate of Starch,	$\bar{z}$ ii.	(Tre.)

Or,

Liq. Carbon. Deterg.,	$\bar{z}$ ii,
Tr. Krameriaë,	$\bar{z}$ iv.
Mucil. Amyli,	ad. $\bar{z}$ iv.

Inject $\bar{z}$ i night and morning. (Tre.)

Other useful astringents are: **Alum**, $\bar{z}$ ss-i-Oj; **Tannin**, 1-2 per cent. solution; **Zinc Sulphate**, grs. vx- $\bar{z}$ i; **Infus. Hydrastis**, $\bar{z}$ i-Oj.

PROSTATE, HYPERTROPHY OF.

Guard against exposure and sudden chilling, always protect limbs and feet when arising to urinate at night. A warm and equable climate is of great benefit. Over-distension of bladder should never be permitted. Horseback riding and excesses of all kinds should be avoided.

The passage every fifth day of a full-sized conical

steel sound or the local application to the prostatic urethra of a solution of **Nitrate of Silver**, 1–3 grs. to the ounce with a Keys-Ultzman capillary syringe, gives good results. (Cl.)

Catheterization:—Often necessary to remove residual urine, especially when atony of the bladder exists. It may be employed before retiring in order to give a better night's rest, and may also be required during the day. In some instances it will be necessary to use Mercier's catheter with one or two elbows, or an English catheter moulded to an exaggerated curve by placing in hot water, then cooling in ice water; quickly introduced with stylet removed, this will frequently succeed in entering the bladder. If cystitis exists the bladder should be washed out with an antiseptic solution. Catheters should receive strict antisepsis. (Cln.)

Bottini's Galvano-Cautery Incision:—This method consists in burning one or more grooves through the obstructing portion of the prostate by the galvano-cautery. Freudenburg's modification of Bottini's incision renders the procedure thoroughly aseptic and entirely under the control of the operator. This instrument is described as follows: "It consists of a shaft shaped like a lithotrite, provided with a platino-iridium blade, or a male shaft which is connected directly with a storage battery, or with a street alternating current of 104 volts, by means of the cautery transformer, and controlled with an ampère meter, and concealed when the blade is closed within the female blade. The platino-iridium blade is exposed by turning the wheel attached to the Archimedian screw to the right, the scale on the exposed shaft behind the wheel exactly gauging the length the male blade is exposed

or the length of the groove made in the prostatic tissues. The incisor is provided with a cooling apparatus, which runs through the entire length of the shaft, crossing at the beak and returning on the opposite side of the instrument. The entrance and exit of the water canals are directed downwards and inwards. To one is attached a piece of rubber tubing, which supplies cold water from a reservoir and to the other a similar piece of tubing, which conveys the water to a receiver."

Before operating it is very important to examine the bladder thoroughly with the cystoscope, and with Thompson's stone searcher, in order to ascertain whether or not a stone is present, and to determine the relative size of the middle and lateral lobes of the prostatic.

Excellent results are obtained from the Bottini-Freundenberg method. It is not, however, free from danger, and is contra-indicated when the kidneys are involved. Sepsis from opening a pocket of pus in the prostatic abscess and pulmonary thrombosis must be considered as possible dangers. When cystitis or pyelitis are present, both local and internal antiseptic medication should precede the operation. (The details and technique of application are fully described by Dr. B. G. Carleton in the N. Y. Med. Times, Dec., 1898.)

PROSTATITIS.

ACUTE PROSTATITIS:

Rest in Bed, Hot Sitz or General Baths, Fomentations to perineum, Rectal Douches of hot or cold

water, injected against the prostate by means of a rectal psychophore, or by enemata of from two to four quarts of water, several times a day are effective measures. (Cln.)

Anodyne suppositories, containing **Belladonna**, **Hyoscyamus**, or **Opium**, such as the following:

Ext. Opii Aqueos.,	gr. j.
Ext. Hyoscyami,	gr. ss.
Ol. Coccois,	q s.

Or,

Ext. Belladonnæ,	gr. ¼. (Sn.)
Ol. Coccois,	q. s.

Leeches:—To the perineum are recommended by some authorities when there is much throbbing and pain. (Al.)

Catheterization:—When there is retention, the urine must be drawn, instrumentation being preceded by a douche of a 2 per cent. solution of **Cocaine**.

Incision:—When an abscess forms it must be opened in the perineum in order to avoid ischio-rectal fistula. If it becomes necessary open the abscess in the rectum, make a punctured incision and keep the rectum aseptic as much as possible by frequent **Carbolic Douches**. After antiseptic douching the cavity of the abscess may be distended with a warm emulsion of **Iodoform** in vaseline in the strength of 10 per cent., which will give excellent results. If an abscess open into the urethra, the canal should be irrigated twice a day with a saturated solution of **Boric Acid** or a solution of **Nitrate of Silver**, 1–2000. (Cln.)

Cold Sitz Baths:—Of twenty to thirty minutes, daily at bed times.

Suppositories of **Iodoform** or **Ichthyol**, containing each about 2 grains, have proved beneficial. (Cln.)

Cleanse the rectum first with a douche before inserting.

Tannate of Glycerine:—Applied to the inflamed point in the urethral canal by means of a deep urethral syringe is said to have good effect. (Al.)

Massage of the Prostate:—The patient should be placed in the dorsal position with the limbs slightly flexed or in the knee and elbow position. The finger of the operator, protected by a long rubber tip and anointed with vaseline, is inserted into the rectum. The diseased gland is massed from right to left and the reverse. The tip of the finger should also be employed to press the gland forward toward the symphyses, and a forward and backward massage movement made. This procedure should be continued from two to five minutes and may be repeated every fifth day. In some cases it is advisable to introduce a full sized steel sound into the urethra, and retain it during massage. Massage by Feleke's or Swinburne's instruments is not advised. (Cln.)

Cantharidal Collodion:—Is advised by some writers; one side of the perineum is painted up to the raphé and the patient is kept in bed; when the part has healed the other side is painted. The anus and scrotum must be protected. (Cl.)

The **Rectal Psychrophore** or Kemp's rectal cooler are also of service.

CHRONIC PROSTATITIS:

Rest in the recumbent position and evacuation of the bowels daily by **Enema** are important factors of treatment.

The passage of **Cold Steel Sounds** is very efficacious; a full-sized sound should be selected and passed

with the utmost gentleness and ease, or it will be arrested by the compressor urethræ, which is usually in a condition of spasmodic contraction. The sound should be passed every five or eight days. In some cases a Carleton's or Kollman's antero-posterior urethra dilator may be used. (Cl.)

The Psychrophore:—As some attribute the good results from the use of the sound to the cold, the passage of a hollow instrument through which cold water is caused to flow, left in situ for about five minutes, is also employed. (Cl.)

Nitrate of Silver:—2-3 drops of a solution, gr. i-x-3i, applied by means of the Key's-Ultzman capillary syringe, may be used when the mucous membrane is seriously affected, as shown by the discharge of round masses from the lacunæ of the glands. (Cl.)

In many cases the application of this remedy to the prostatic urethra will be attended with benefit. For strong solutions will cause intense reaction. The solutions should be accurately placed in the prostatic portion of the urethra. This may be accomplished by introducing a catheter and thus ascertaining the point at which the urine begins to flow, with the length of the urethra known there will be no difficulty in making the application. The solutions should be generally increased up to 5 per cent. and should not be applied more frequently than once in five days.

PRURIGO.

The first aim of treatment is to improve the hygienic surroundings of the patient and to employ liberally soap, water, and clean clothing.

Pilocarpine Muriate:—On account of its action on the sweat glands, has a powerful effect on the general condition and may be regarded as a reliable remedy. It may be administered hypodermically, but in small doses, for fear of collapse. (B. H.)

Baths:—Plain or alkaline, are very generally employed, followed by ointments or lotions, viz:

Unna's ointment acts favorably. It is composed **Zinc Oxide Ointment**, 100 parts; **Carbolic Acid**, 5 parts; **Corrosive Sublimate**, $\frac{1}{4}$ – $\frac{1}{2}$ part.

Wilkinson's Ointment:—Hebra recommends the following modification of Wilkinson's ointment (in which sulphur is the main ingredient):

Flor. Sulphuris,	
Ol. Cadini.,	āā ʒvj.
Sap. Vir.,	
Adipis,	āā Oj.
Cretæ,	ʒiv. (And.)

Anderson recommends **Plain, Warm, Vapor, or Turkish Baths**, followed by friction, and the use of the following ointment:

Sulphuris,	
Glycerini (Price's),	
Ol. Rusci,	āā ʒvi.
Ung. Rumicis,	ʒii.

Vlemingckx's Solution:—Followed by hot baths, are also advised. (Hy.)

The following other remedies may be mentioned as effective:

Tar Ointment, Sodium Thiophene Sulphonate, Sodium Sulphophenate (5–10 per cent. ointment); **Hebra's Soap Treatment**, as for eczema, all constitute useful remedial measures.

Naphthol:—2–5 per cent. solution, according to

age, rubbed in every night in conjunction with a bath of naphthol soap every second night. (Ja.)

Tumenol:—A 10 per cent. solution made with equal parts of alcohol, glycerine and water. (Al.)

PRURITUS.

External treatment, though of little effect in curing, is of great benefit in relieving. When the disease covers the whole surface of the body, baths will be found of service. Linen underwear, over which flannel can be worn, agrees with some, while others prefer silk. A great number of remedies, of which the following are the most important, are employed for the relief of this intractable affection:

Carbolic Acid:—One of the most effective applications, it generally be tried first. It may be employed in strengths varying from 5–20 grains to the ounce, or in the following combinations:

Carbolic Acid,	20 parts.
Glycerine,	75 parts.
Alcohol,	25 parts.
Distilled Water,	300 parts.

1–4 tablespoonfuls in a tumbler of hot water; bathe parts.

(T. 98.)

Combined with creoline, it will be found useful in the following proportions:

Carbolic Acid,	2 parts.
Creolini,	3 parts.
Cologne Water,	100 parts. (Hy.)

A solution in **Alcohol**, 1–2 drachms to the ounce, is recommended. Mop the skin gently, but do not rub in. A spray of the strength of half an ounce, to wa-

ter 1 pint, and glycerine 1 ounce, with 5–10 minims of oil of peppermint added, is also useful. (Ja.)

The fact that the skin of some persons is much more sensitive and liable to irritation than others must be taken into consideration before employing the stronger solutions. An ointment being sometimes preferable, the following will be found useful:

Acid. Carbolic,	grs. xv–xx.
Ung. Zinc. Oxidi,	℥i.

Menthol:—Used in various strengths; an alcoholic solution containing 10 per cent. acts well. (F.) In severe forms a solution of 50 grains to the ounce of olive oil has proved effective. (Al.) Or combined with cocaine, viz:

Menthol,	℥i.
Cocaine Hydrochlorate,	grs. xx.
Alcohol,	℥i.
Water,	℥i.

Cocaine:—2 parts with 100 of flexible collodion, or a solution of 20 per cent. with 5 of glycerine. (F.)

Brucine:—Acts somewhat like cocaine and has been satisfactorily employed in 20 per cent. solutions. (F.)

Chloroform:—1 drachm; olive oil, 1 drachm; will allay the itching of urticaria and pruritus (F.), or ℥i with 1 pint of alcohol. (B. H.)

Ichthyol:—Will prove useful, though it makes a disagreeable application; the following is a method of application:

Ichthyol,	10 parts.
Spirits of Wine,	40 parts.
Ether,	40 parts. (T. 97.)

Bulkley has used:

Ichthyoli,	℥i.
Ung. Picis,	℥i.
Zinc. Oxidi,	℥ii.
Ung. Aq. Rosæ,	℥iii.

Or,

Ichthyol,

Ol. Cadini,

Ol. Gossypii,

āā ʒi.

Use diluted with oil.

Camphor:—Useful in the form of the spirits, powder or ointment, or combined with chloral by trituration of equal parts, forming the well known glycerine like mixture. An ointment is composed as follows:

Camphor.,

Chloral,

āā ʒi.

Ung. Aq. Rosæ,

ʒi.

These preparations should not be used on the broken skin.

(Vn.)

It may also be combined effectively with borax, as follows:

Spts. Camph.,

ʒss.

Boracis,

ʒij.

Glycerini,

ʒij.

Aquæ,

ʒvj.

To be well shaken before applying.

(A. C. S., 8, 77.)

It may also be mixed with potassium sulphuret in the following proportions:

Potass. Sulphuret.,

ʒiij.

Spts. Camphor,

f ʒss.

Glycerini,

f ʒi.

Aq. Fort.,

q. s. ad. f ʒvj.

Apply by the medium of a saturated strip of lint.

Opium:—In the following ointment: Opium, 8 grains; creosote, 10 drops; vaseline, 2 ounces. (Ga.) Or in the form of morphine in the proportion of 1 grain to the ounce, added to the two compound camphor lotions above, may be employed when anodyne lotions are desired. (Hy.)

Pilocarpine:—Simon has successfully employed this remedy hypodermically in doses of $\frac{1}{6}$ of a grain of the muriate. (Hy.)

Alkaline Lotions:—Sod. Bicarb., $\mathfrak{z}\text{i}$ -O℥; Borax, sat. solution in rose water; Lime Water (pure), or in the following is especially useful for the itching of eczema and other inflammatory conditions of the skin, also in senile pruritus:

Liq. Calcis,	$\mathfrak{z}\text{ijj.}$
Creosoti,	M. x.
Pulv. Zinc. Carb. (Impure),	$\mathfrak{z}\text{i.}$
Glycerini <i>vel.</i> Olei Olivæ,	$\mathfrak{z}\text{ijj.}$ (Sm.)

Losophen:—1-2 per cent. in a mixture of 3 parts of alcohol and 1 part of water, apply two or three times a day. In some cases this will prove irritating; an ointment of 1-3 per cent. is also used. (F.)

The following is recommended in dry itching inflammatory affections of the skin:

Talc,	
Powdered Starch,	each 5 parts.
Glycerine,	20 parts.
Lead Water,	100 parts.

This is to be diluted with twice the volume of water, shaken and applied to the skin and allowed to dry. When the skin is broken, half the lead water may be replaced by a 1 per cent. solution of boric acid. The lotion is contra-indicated when there is a fluid discharge. (T. 98.)

Among some of the useful powders are the following:

Talc,	
Oxide of Zinc,	each 5 parts.
Salicylate of Bismuth,	10 parts.
Rice Starch,	90 parts.
Borax,	2 parts.
Talc,	10 parts.
Oxide of Zinc,	30 parts.
Rice Starch,	60 parts.
	(T. C. Vol. 5.)

Medicated Baths:—These will at times afford relief; the following will be found of service:

Sodium bicarbonate, $\text{℥viiij}-\text{℥x}$; water, 30 gallons; nitric or hydrochloric acid, ℥i ; water, 30 gallons. Starch baths, followed by sponging with aromatic vinegar 250 parts, and carbolic acid 5 parts. Sulphur baths also are sometimes useful. After the bath the patient should be dried by wrapping in warm sheets, followed by a vigorous patting of the skin, anointing same with some bland oil and powdering with starch.

Acid Lotions:—Viz: Vinegar, Lemon Juice (pure or diluted), and solutions of Dilute Hydrochloric Acid are said to relieve the itching of urticaria.

Tannin:—Squibb's formula is as follows:

Acid. Tannici,	℥j.
Glycerini,	
Spts. Vini Rect.,	āā ℥ss .
Aq. Destill.,	ad. ℥iv .

Apply morning and evening on a rag.

The following are among the almost endless number of remedies which have been advised for this condition:

β -Naphthol.,	℥i.
Retinol,	
Sapo. Mollis,	āā grs. cc.
Pulv. Cretæ Præparat.,	℥ii.
Essence of Wintergreen,	1 part.
Thymol,	2 parts.
Resorcin,	4 parts.
Cologne Water,	100 parts.

Mercuric Bichloride:—Grs. ss- ℥i .

Burow's Liquor:—(See Appendix II.)

Resorcin:—Grs. x -xx- ℥i .

Tumenol, a 10 per cent. alcoholic or aqueous solution. Also lotions of **Hamamelis**, dilute **Aqua Ammonia**, **Tar Water**, and **Goulard's Solution**.

Liq. Picis Alkalinus:—Picis liq., ℥ii ; potass. caust., ℥i ; aq., ℥v . Dissolve the potash in water and gradually add to the tar with rubbing in a mortar. Dilute for use in the proportion of 1–2 drachms to a pint of water, gradually increasing the strength.

PRURITUS ANI.

Removal of cause when it can be ascertained, such as hæmorrhoids, fissure, eczema, ulcer, polypi, ascarides, etc., is the first essential of treatment. Many cases, however, are unattended with any discernible pathological change, and palliative treatment is necessary. Applications may be made in the form of lotions or ointments; as a rule, the latter are preferable. Of the numerous remedies for this condition the following are worthy of mention.

Hot Water:—Applied as hot as can be tolerated with soft cloth or by sitting over a pail of hot water and sopping the parts; dry gently by patting the skin, and dust with starch powder.

Carbolic Acid:—One of the most effective agents.

Acid. Carbolic.,	℥ss.
Glycerini,	℥i.
Aq. Destill.,	℥iii.

Dilute if too strong; apply at night. (K.)

Alum and Zinc Sulphate:—Equal parts of each placed in an earthen vessel and heated until they become a hard mass; of this half a drachm is powdered in a little water and thrown into the rectum every

night; in a few minutes it will dispel the itching, and will succeed when other drugs have failed. It is especially indicated when there is engorgement of the hæmorrhoidal veins. (Al.)

Campho-Phenique:—Equal parts with **Zinc Ointment**, is highly praised (Al.), or ʒi to water ʒi after bathing in very hot water. (Mc.) Another useful formula is:

Campho-Phenique,	ʒi .
Losophen,	grs. xx.
Cosmoline,	ʒi . (T. 98.)

Salicylic Acid:— ʒv – ʒi , will often afford great relief. (Al.)

Cocaine and Menthol:—Combinations are effective. (See Pruritus.)

Nitrate of Silver:—A solution of grs. xvi. in **Nitrous Ether** (Ja.), or grs. xx; water, ʒi (Gt.), painted on will cause pain, but will afford immediate relief.

Bulkley's Antipruritic Powder is very satisfactory; it is composed of 1 drachm each of **Camphor** and **Chloral**, rubbed together until liquified, then mixed with 1 ounce of starch.

Tr. Sapo. Vir.:—When there is thickening of the skin from effusion this is indicated.

The following combination also acts well:

Sapo. Virid.,
Ol. Cadini,
Alcohol., p. e.

This is most effective, at the same time more disagreeable than the green soap alone; it should be applied once a day.

Applications of green soap should be followed by soothing ointments. (K.)

Brocq employs as a soothing ointment **Zinc Oxide** and **Vaseline**, followed by this powder:

Powdered Camphor,	2 parts.
Zinc Oxide,	30 parts.
Bismuth Subnitrate,	30 parts.
Chalk,	40 parts. (T. 98.)

Lead Acetate:—The following is used at St. Mark's Hospital, London:

Liq. Plumbi Subacetate,	1 part. .
Fresh Milk,	7 parts.

Add the milk to the lard by degrees, at the same stirring; apply on cotton and retain in situ. (T. 98.)

Collodion:—May be painted on as a protective when eczema and excoriations are frequent.

Tar Ointments:—These are generally soothing and are indicated when eczema exists.

The following are suggested, Ung. Picis painted on (T. 98.), or:

Ung. Picis,	℥ iii.
Ung. Belladonnæ,	℥ ii.
Tr. Aconiti Rad.,	℥ ss.
Zinc. Oxidi,	℥ i.
Aq. Rosæ,	℥ iii. (Mc.)

Tr. Iodine (Churchill's):—A painful but very effective remedy. (Gt.)

The following is recommended, to be injected daily:

Fld. Ext. Hamamelidis,	℥ i.
Ext. Ergot.,	℥ ii.
Ext. Hydrastis,	℥ ii.
Tr. Benzoin, Comp.,	℥ ii.
Ol. Olivæ Carbolat., (5 per cent. Carbolic Acid),	℥ i.

Shake well before using; 1-2 drachms for injection. (B. H.)

An ointment of Dr. I. V. Shoemaker's is:

Sulphur Præcipitat.,	℥ i.
β-Naphthol.,	grs. x.
Morphiæ Sulph.,	gr. ss.
Bismuth. Subnitrat.,	℥ ss.
Ung. Zinc. Oxid.,	℥ ss. (Sh.)

Two formulæ commended by Kelsey for use in obstinate cases are as follows:

Liq. Carbonis Deterg. (Wright's),	
Glycerini,	āā ʒi.
Pulv. Zinc. Oxidi,	
Calamin. Præparat.,	āā ʒss.
Pulv. Sulph. Præcipit.,	ʒss.
Aq. Destill.,	ad. ʒvj.

To be painted on once or twice a day and allowed to dry.

Sod. Biborat.	ʒii.
Morph. Sulph.,	grs. xvi.
Acid. Hydrocyanic, Dil.,	ʒss.
Glycerini,	ʒii.
Aq. Destill.,	ad. ʒviii.

Apply 4 or 5 times in twenty-four hours.

Borax:—Forms an excellent soothing application; the powder dusted on the raw surfaces, kept separated by soft gauze, is used with good effect when moist eczema is the cause, a condition in which mild dry dressings are indicated. (Gt.) In other cases a saturated solution acts well.

Dilute Sulphurous Acid—After cleansing the parts with soap suds this is said to afford quick relief in cases of eczema marginatum. (Gt.)

Suppositories containing **Belladonna**, **Cocaine**, or **Creosote** give relief in cases where the parts are excoriated; in this condition **Menthol**, **Peppermint**, and **Chloral** can not be employed. (Ja.)

Forcible Divulsion:—When no local cause can be detected this measure has given satisfactory results (Gt.) in conjunction with removal of redundant skin by cutting and scraping; it is recommended in cases which have resisted all other means. (T. 98.)

PRURITUS SCROTI:

Many of the remedies mentioned under the general

head of pruritis are applicable to the disorder in this locality. In addition the following have proved satisfactory:

Picric Acid:—1-5 parts-1000, has succeeded when other applications have failed.

Phenol:—20 parts, glycerine 75 parts, alcohol 25 parts, and water, 300 parts; one part of this mixture is diluted with 4 of water and applied by means of saturated gauze. (T. 97.)

Pyroligneous Acid:—1 part to 30 of water or glycerine, or an ointment gradually increased in strength, is recommended by Piffard.

PRURITUS VULVÆ:

Washing the parts with soap and water, then with a **Sublimate Solution**, following with applications of **Cabolized Vaseline**, 3-5 per cent., often proves successful. (T. 97.)

Hot Water Sponging:—Using the water hot as it can be borne is excellent and should be tried in all cases. (Vn.)

Nitrate of Silver:—A 2 per cent. solution is highly effective.

The following method is recommended: Administer a vaginal injection every night of a solution of **Lysol**, followed by one of **Boiled Water**, and lastly by one of **Sublimate**. Wash the vulva with care and introduce between the labia a fold of muslin wet with a solution of **Tannin** 3ss-Oj. Excoriations may be touched with **Nitrate of Silver**. (T. 96.)

Cocaine Hydrochlorate:—May be employed with good effect when the affection appears to start from the clitoris and is attended with nervous crises:

Cocaine Hydrochlor.,	ʒi.
Acid. Boric.,	ʒiii.

Dust on the clitoris and underlying parts; instant but only temporary relief will be obtained.

Tannaform:—1 part; starch, 4 parts, for diabetic pruritus. (F.)

The following are useful applied with saturated compresses:

Fld. Ext. Grindeliæ,	ʒss.
Creolini,	ʒii.
Aquæ,	q. s. ad. ʒv.

Or,

Potass. Bicarb.,	ʒii.
Aquæ,	Oj.

Veratria:—In the proportion of 3 grains to the ounce of lard, is recommended by Chéron. (Hy.)

Hydrocyanic Acid:—Used in severe cases, but with caution, and never where the skin is abraded, viz:

Acid. Hydrocyanic, Dil.,	ʒii.
Acid. Boric.,	ʒi.
Aq. Rosæ,	ʒviii.
Bismuth. Subnit.,	ʒii.
Acid. Hydrocyanic, Dilut.,	ʒi.
Mist. Amygdalæ,	ʒiv. (And.)

Emollient poultices, such as fresh **Almond Meal**, sprinkled with **Boric Acid**, will prove soothing; also the following lotion painted on parts:

Sodium Sulphite,	ʒi.
Glycerine,	ʒi.
Water,	ʒiv. (B. H.)

Though ointments are rarely used, the following may occasionally prove of service:

Hydrarg. Chlorid. Mitis,	
Ext. Belladonnæ,	āā ʒi.
Ung. Aq. Rosæ,	ʒi.

Injectations of **Zinc. Sulph.**, grs. v-x- $\bar{z}$ i, and **Bichloride of Mercury**, 1-4000, used on alternate days, with bathing of the external genitals once or twice daily with **Eichhoff's Sublimate Soap**, constitutes a useful adjuvant to any mode of treatment.

PSORIASIS.

Cleanliness of person and clothing should first receive strict attention. All causes tending to depress vitality, as excesses, overwork, relaxing climate, or other drains upon the system, should, if possible, be eliminated. Local measures are of prime importance, and are of two classes, first, those used to remove the scales, and so prepare the way for the second, which includes those exercising a directly curative effect upon the diseased skin, and so preventing renewal of the scales.

For removal of the scales the following methods are efficacious:

Alkaline Baths, Wet Packing, Inunctions (with oil, vaseline, fat, soft soap, and even caustics), and a six percent. solution of **Salicylic Acid** in spirit. The fat requires to be well rubbed in. Many cases get well with one of the above methods alone if persevered in. **Continuous Baths** in tepid water have been successful. (Ck) **Daily Hot Baths** and the use of soap and a nail brush should be employed in all cases, especially when the disease is wide-spread. The following alkaline bath may be resorted to and patient allowed to soak in it for twenty minutes, after which scales may be rubbed off:

Bicarbonate of Soda,

$\bar{z}$ ii- $\bar{z}$ iij.

Water, 30 gallons, at temp. of 95° to 100° F.

Much depends upon the thoroughness with which the scales are removed.

Sapo-Mollis (Potash Soap, Black Soap):—Rubbed night and morning and washed off as seldom as possible; highly praised by Hebra. (Hb.)

Mercurial Ointments:—These are useful when only mild stimulants can be tolerated, viz: **Hydrarg. Ammon.** grs. x, vaseline ʒii-ʒi , or **Hydrarg. Oxid. Flav.** in the same strength, or these two mercurial ointments combined, or **Ung. Hydrarg. Nitrat.**, more or less diluted, or **Hydrarg. Biniodid.** grs. iii—x to the ounce; the latter being a stronger stimulant. (Ck.)

Chrysarobin:—This is the best application, especially when it is desired to remove the patches rapidly. An ointment of half a drachm to a drachm to the ounce may be employed, though it is better in the strength of about 5 per cent. Its activity is increased by the addition of salicylic acid (3 per cent.).

A paint which has been markedly successful is:

Chrysarobin,	ʒi.	
Acid. Salicylic.,	ʒi.	
Liq. Gutta Percha,	ʒi.	(Kp.)

This remedy has the great objection of staining everything with which it comes in contact, dying the hair orange yellow, and ruining all clothing. It should never be applied on the face or scalp; on account of the dermatitis to which it may give rise, and the danger of violent conjunctivitis should any find its way into the eyes.

The following solution avoids the smearing effect of an ointment:

Chrysarobini,	ʒi.	
Collodii,	ʒi.	
Æther et Alcohol.,	āā q. s.	(Ck.)

Rub the chrysarobin with the alcohol and ether, and add the collodion. It will result in an emulsion, which should be shaken before using and applied with a brush after the removal of the scabs. In general attacks Unna's Compound Chrysarobin Ointment (chrysarobin 5 parts, salicylic acid 2 parts, ichthyol 8 parts, and vaseline 90 parts) is effective and speedy; it should be rubbed in after a bath. If chrysarobin produces too great a reaction it should be discontinued, and starch, vaseline, or an alkaline wash substituted. It stains the healthy skin a deep mahogany, and leaves the patches white; it should, therefore, be continued until the patches are affected in the same way.

These effects may be avoided by using Auspitz's method, viz:

Dissolve gutta percha ʒi in chloroform ʒx , to this add ʒi of chrysarobin, which solution, after the scales are removed, is painted on and forms a film. It is renewed every two or three days.

Besnier's modification of the above is to paint on a solution of chrysarobin in chloroform, and then cover it with the chloroform and gutta percha varnish. Both methods are equally efficacious, and are superior to Pick's plan. (Ck.)

Pyrogallic Acid:—This remedy stands next to the preceding in importance. It stains everything black, and, on account of its poisonous action by absorption, is not suited to application over extensive surfaces. Its action is less inflammatory than that of chrysarobin. The strength of its application is from a drachm to the ounce or weaker. (Vn.) The following combination has been productive of good results in cases which have resisted other treatment: Pyro-

gallic acid, salicylic acid and ichthyol, each 3 parts, and olive oil and lanoline, each 10 parts. (T. 97.)

Tar:—Has been found useful in various forms, and acts well when there is much itching. Crocker recommends **Ol. Cadini**, ʒss to the ounce, as ointments, or as lotions dissolved in spirits with or without soft soap, equal parts of each, as Hebra recommends, or, **Liq. Carbonis Detergens**, M x-ʒi and upward. He speaks also of tar baths as being useful remedies.

The following is also a convenient mode of applying this remedy:

Ol. Rusci,	50 parts.
Ether,	
Alcohol,	each 75 parts.

Filter and add oil of lavender, 2 parts, rub in at night, and wash off in the morning. The patient should sleep in a flannel gown. (Kap.)

Thymol:—Introduced some years ago by Crocker, forms a pleasant and suitable application for the face, being more cleanly and of less offensive odor than the aforementioned remedies. An ointment may be used in the strength of grs. xv-ʒiii to the ounce, or as a lotion as follows:

Thymol,	ʒi.	
Liq. Potassæ,	ʒi.	
Glycerine,	ʒss.	
Elderflower Water,	ʒviij.	(Ck.)

Naphthol:—This remedy is of equal efficacy with thymol. Kaposi recommends it in the strength of 80 grains to the ounce. A soap containing 2 drachms of the remedy to the ounce of green soap has been found to act well in cleansing the scalp, and an ointment of naphthol ʒi, lard ʒi, is useful for re-

moving the scales from the body. If used over an extensive surface it may induce toxic symptoms. It may, however, be regarded as an excellent remedy when for any reason chrysarobin or pyrogallie acid cannot be used. (Al.)

Sulphur:—Hebra's modification of Wilkinson's ointment often proves effective; the formula is as follows: Sulphur sub., ol. cadini, āā 3ss; sapo vir., adipis, āā 3j; cretæ præparat., 3jss. The ointment of tar and sulphur may also be used combined in the proportion of a drachm of the former to an ounce of the latter. (Guy's Hospital.)

An ointment of sulphur (10–30 grains to the ounce) may be applied to the scalp, the strength depending upon the irritability of the part. (T. 98.) Vlemingckx's solution (See Acne) is also of service.

Among other remedies may be mentioned **Nitrate of Mercury Ointment** (F.); **Solutions of Nitrate of Silver** (3ij–3i), recommended by Fox in chronic cases (B.); **Gallacetophenone**, 10 per cent.; **Ichthyol**, 5–20 per cent.; **Resorcin**, 5–20 per cent. (B. H.); **Anthra-robin**, the action of which is analogous to that of chrysarobin, and **Turpentine**. This last is a powerful, penetrating stimulant, and has been employed in a large number of cases with gratifying success. It is cleanly, but the odor is a drawback. It can be used undiluted (in which case the skin is smeared with vaseline to prevent dessication) or pure, combined with olive oil in the proportion of turpentine 3i to ol. olivæ 3vij, and upward. (Ck.)

For a base of ointment, lard, or vaseline, combined advantageously with 10–40 per cent. of lanoline, are most frequently employed. If a plaster is desired, use Unna's paste.

India Rubber Underwear:—Is recommended by Crocker to be worn continuously for twelve hours or more and changed night and morning. The effect, he claims, is excellent, especially if the skin becomes moist and macerated.

PYORRHŒA ALVEOLARIS.

Carbolic Acid:—The persistent application of the crystals will cure this affection.

Hydronaphthol:—Grs. xvi.; alcohol, ʒi; water, ʒi; teaspoonful to half a pint of water may be used freely with good effect as a mouth wash. (Al.)

Menthol useful as an anodyne and antiseptic. (F.)

Pyrozone:—2-5 per cent. solution in ether, has been found a very effective stimulating and caustic application, especially serviceable in checking suppuration. (F.)

RABIES.

Immediate measures for the elimination of the poison from the wound should be employed, viz:

Suction:—The patient should immediately suck the wound; if he is unable to do so himself, a second person may do so for him, though it is not without danger, owing to possible abrasions of the mouth. The mouth should be rinsed immediately.

Cauterization:—Stands next in availability. The Actual Cautery should be freely applied; red hot iron, poker, or any iron article. The Paquelin or galvanic

cautery should be used if convenient, but the chances are these instrument will seldom be accessible. The pain of the actual cautery is not more severe than mineral escharotics. It should always be preferred, but in its absence **Nitrate of Silver**, the stick thoroughly applied, or **Caustic Soda** may be used. It is claimed that the former is especially effective. **Carbolic Acid**, pure, or **Corrosive Sublimate**, 1-500-1000 may be used as substitutes, but only when the cautery is not available. (Ty.)

Excision of the wound:—Is recommended as a paramount necessity by some writers. (Hy.) As it is claimed that the instrument used may become infected by the virus from the wound, caution is necessary.

Pasteur's Attenuated Virus:—This treatment can only be carried out at a Pasteur institute, one of which is situated in New York. A careful examination of the results of this method by exact and conscientious observers show it to be an efficient agent in saving life.

For the paroxysms: **Chloroform Inhalations**; subcutaneous injections of **Morphia** in full doses; **Curare**, in doses of $\frac{1}{16}$ – $\frac{1}{8}$ grains; **Ethyl Bromide** in doses up to a drachm, both subcutaneously, or **Amyl Nitrite** inhalation should also be tried. (B.)

RANULA.

Iodine:—A few drops injected into the sac, usually effects cure. (H.)

Chromic Acid:—After evacuation and washing out of cavity the saturated solution may be freely applied. (Sm.)

Nitrate of Silver:—The crayon after removal of a portion of the sac.

Nitric Acid:—May be employed if a stronger agent is desired (Hl.), but other remedies are preferable. The use of a Seton is an old and effective method. (Bt.)

RECTUM AND ANUS, PROLAPSUS OF

In recent prolapsus the immediate indication is replacement of the bowel and relief of strangulation. Place the patient on the left side with the pubis well elevated, the shoulders and head depressed, or in the knee and elbow position, in either of which the replacement of the bowel is assisted by gravity. The fingers of the operator and the protruded mass should then be well lubricated and steady and gentle pressure exerted on the bowel in the direction of its narrowed position. This procedure will generally succeed. When the spasm of the sphincter is so great that reduction is impossible without injury to the bowel, and gangrene is threatened, the patient should be etherized and the sphincter dilated at once when the prolapsed bowel can be restored. (W).

In children non-operative or palliative treatment is generally successful; the child should never be allowed to sit and strain when the bowels move, but movements should be passed lying upon side or standing, one buttock being drawn aside so as to tighten the relaxed sphincter. When the bowel has protruded it should be douched with cold water and an astringent applied. (All.)

The following time honored astringent remedies are recommended :

Alum:—One of the most useful agents may be employed in the strength of 2 drachms to the pint of distilled water (Gt.), or in solution with decoction of oak bark, 1 scruple to the pint, and stronger if well borne. (All.)

Tannic Acid:—In the form of a strong watery solution, *Infus. Matico*, *Krameria*, *Hamamelis* (All.), *Zinc. Sulph.*, grs. ii- $\bar{z}$ i, *Tr. Iron* grs. xx-xxx- $\bar{z}$ iv (K.). All may be applied to the protruded bowel with a sponge or bit of soft cotton, and in the case of children adhesive plaster should be applied so as to draw buttocks together; in adults a T bandage should be employed.

Ergot:—The concentrated fluid extract injected into the submucous tissue in doses of 5-7 grains, repeated every second day for two weeks, is a procedure which has been recommended on high authority, Agnew and Langenbeck, but is deprecated by Allingham as uncertain and liable to produce abscess.

Nitric Acid:—Very effectual in children, recommended when milder measures have failed; the protruded bowel should be well dried and the acid applied, care being exercised to protect the anus and skin by a bland ointment. The part should be well oiled and returned to the rectum, which, by some authorities, is recommended to be packed with cotton (All.). Others regard adhesive plasters binding buttocks together as sufficient. The limbs also had better be bound. Anæsthesia is of course necessary.

In the treatment of adults nitric acid is only temporary in its effects; in elderly persons it must be used with caution on account of deep sloughs which

may be produced in debilitated constitutions. (All.)

Linear Cauterization:—In adults this is undoubtedly the best means; the patient is etherized and placed in the Sims position; from three to six vertical stripes should then be made on the mucous membrane with the Paquelin cautery at a dull red heat. The stripes should begin three inches up the rectum and end at the junction of the skin and mucous membrane.

Mr. Allingham in severe cases burns through the sphincter in two places at opposite points after reducing the bowel, and inserts a pledget of oiled wool. He applies the cautery before reducing the bowel. Van Buren, who first recommended the procedure, replaced the bowel and applied the cautery through a speculum.

In extensive cases of long standing the cautery may be applied to the whole circumference of the anus so as to produce cicatricial contraction. (K.)

Clamp and Cautery:—Constitute the most radical treatment of this condition, and may be resorted to when all other means have failed; for the technique of the operation see works on surgery.

RECTUM, ULCER OF.

Rest:—Is indicated in all stages of treatment. Rest in bed with fluid diet will alone cure some cases. (K.)

Local treatment varies, and will require changing from time to time; it is long and tedious and will sorely try the patient, who will require much patience. The first requirement of treatment is a thorough cleansing of the rectum; this may be done by

copious injections of sterilized water or Castile soap and water. (Gt.)

Irrigation with some antiseptic solution is also employed with advantage before the application of local remedial agents. Solutions of **Boric Acid**, **Corrosive Sublimate**, 1-10,000-5000; **Carbolic Acid**, 1-100, may be used for this purpose.

Ointments:—These are generally to be preferred, as superior to suppositories. The rectal ointment applicator is necessary for their administration.

The following are recommended :

Bismuth. Subnit.,	ʒii.
Hydrarg. Chlorid. Mitis,	ʒii.
Morph. Acetat.,	grs. ij.
Glycerini,	ʒii.
Vaselini,	ʒi.

This is very sedative and soothing.

Iodoformi,	grs. xx.
Cocainæ,	grs. xviii.
Lanolini,	ʒ ss.

Allays irritation and pain.

(All.)

Hydrastis:—Useful in the proportion of about 1 drachm of the fluid extract to one ounce of vaseline; **Iodoform** may be added with advantage; **Belladonna**, **Opium** and **Stramonium** in the form of ointments, combined with other remedies, form useful adjuvants for the relief of pain and spasm of the muscle. (Pt.)

Balsam Peru:—A mixture composed of half an ounce of the balsam, glycerine 1 ounce, water 4 ounces, will prove healing and soothing. The pure balsam will act well as a stimulant applied over the surface of the ulcer. (Gt.) Strong preparations of balsam of Peru will sometimes cause great irritation

applied to rectal ulcers, followed, however, by beneficial results.

Nitrate of Silver:—A solution of grs. v-x brushed over surface of ulcer through the speculum is often beneficial. (W. C.) Copious irrigation with a solution of grs. xx-xl-Oj is effective in dysenteric ulceration. (All.)

When the ulceration is high, the amount of fluid injected should be large; three pints may be thrown into the upper part of the rectum, sigmoid flexure and lower part of the colon. The long flexible rubber tube should be employed, and the injection made slowly with the patient on the side. (K.)

Cocaine:—In the form of suppositories or a solution, grs. x-xv- $\bar{z}$ i, is often of great service in allaying pain and irritation. (Gt.)

Glycerine:—Injection of 4 drachms as a lubricant and evacuant. (F.)

Nitric Acid:—The fuming acid has been highly recommended as a cauterant. (Gt.)

Dusting powders introduced by an insufflator through the speculum are also very useful; the best are the following: **Acetanilid**, **Alum**, **Bismuth Subnitrate** and **Subiodide**, **Boracic Acid**, **Calendulated**, **Boric Acid**, **Iodoform**, **Lead Acetate**, and **Zinc Stearate**. These remedies may also be applied in the form of ointments with the applicator after irrigation.

They may be administered in the form of suppositories, though constituting the least desirable method of applying remedies to the rectum as their introduction is often attended with pain. They are often used for the sake of convenience.

Operative procedures are frequently necessary, viz:

Forcible Dilation of the Sphincter, may be followed by two or three applications of nitrate of silver if the cause is traumatic; **Curettage**, of benefit, especially in tubercular ulcerations; **Linear Incision** through the base of the ulcer; **Excision**; **Division** of the base of the ulcer, including the sphincter; **Epileptical Incisions**, when the ulcer is not too large and does not extend through the mucous membrane, may be made and the edges brought together with catgut sutures. (Gt.)

RHEUMATISM.

ACUTE ARTICULAR RHEUMATISM.

Local measures play a secondary part in the treatment of the disease. The joints, whether involved or not, should be washed with warm water and soap, and enveloped in absorbent cotton or flannel, held in position by flannel bandages. These should be changed every two or three days, and the surface carefully cleansed with warm water. The entire surface of the body should also be carefully bathed at frequent intervals so that the skin is kept in good condition. Blankets, changed at suitable intervals, should be used for bed clothing, and the swollen limbs supported by pillows covered with flannel. (Gn.)

Salicylates:—When not tolerated by the stomach, administration by the rectum is often attended with satisfactory results. First wash out the bowel with warm water, then, after an interval, inject from 20—

40 grains of sodium salicylate in solution. This may be done every six hours. (Ty.) An ointment for application to the swollen joints is as follows:

Acid. Salicylic,	
Lanolini,	
Ol. Terebinth.,	
Adipis,	āā ʒiii. (An.)

The following have also been used for application to the joints:

Liq. Opii Sed.,	ʒi.
Potass. Bicarb.,	ʒiv.
Glycerini,	ʒii.
Aq. Bullient.,	ʒix.

Soak a piece of flannel in the above hot solution and wrap around painful joint. (Os.)

Fuller's Lotion:

Sod. Carbonate,	ʒvi.
Laudanum,	ʒi.
Glycerine,	ʒii.
Water,	ʒix.

Hot cloths saturated with this lotion may be applied to the swollen points. (Os.)

Paquelin Cautery:—Applied with a light touch above and below the joint is better than blisters, and acts well for the relief of pain.

Fixation of Parts:—Is of great service; use splints for this purpose. (Os.)

Cold Baths:—For hyperpyrexia the treatment must be energetic and prompt, extraordinary high temperature being inevitably fatal in a few hours. For this condition the one treatment is the application of cold. As soon as a temperature exceeds 105° the bath should be employed. If delirium or unconsciousness is associated with the high fever the baths are

all the more indicated. If time permits the temperature of the baths may be gradually made cold, commencing with a temperature of 70° , and ice added if necessary.

Ice Water Effusion:—Rubbing the head and body with ice may be substituted for the bath, though the latter is preferable. Numerous cases are reported with temperatures ranging from 107° – 109° when this treatment was successful. (Ty.)

CHRONIC ARTICULAR RHEUMATISM:

Amber Oil as a rubefacient, viz.:

Oil of Amber,	℥vi.	
Oil of Rosemary,		
Oil of Bergam.,	āā ℥i.	
Oil Turpentine,	℥i.	
Linseed Oil,	ad. ℥iv.	(F.)

Wintergreen Oil:—Equal parts, mixed with olive oil, applied to joints which are wrapped in cotton batting, is used for relieving pain. (F.)

Massage:—One of the most important measures for the relief of stiffness, pain, and contractures resulting from rheumatism as well as the disease in the chronic state. It should be persevered in diligently and patiently. To remove nodosities the following plan has been recommended: Apply emollient poultices for one or two days continuously, then energetic kneading under anæsthesia to crush them; follow this with daily massage. (Sj.)

Sulphur Fumigation:—Subjecting the joint to the fumes of sulphur has proved useful. (F.) Somewhat on the same principle is the old-fashioned remedy of putting flower of sulphur in the stockings, which is not without effect. (Rd.)

Iodine:—May be painted over joint with advantage. (Al.)

Potass. Iodid.:—90 grains, dissolved in water and rubbed up with an ounce of lanoline is often very beneficial; it should be well rubbed in over the affected part. (M. H.)

Fir Wool:—For enveloping the joint, used especially by the Germans, but does not appear to possess any advantage over ordinary cotton, wool or flannel. (F.)

Zinc-Sulpho Ichthyolate:—Sometimes proves useful in the form of a soap liniment, or ointment, in the proportion of 45 grains to the ounce. (F.)

Ichthyol:—A 25–50 per cent. ointment or glycerite continuously applied to joint is likewise effective. (M. H.)

Thiol:—Has been used in the following combination: Thiol and vaseline, each 1 drachm; lanoline, 1 ounce. (Al.)

Guaiacol:—Equal parts, with glycerine painted over painful joints and covered with a dry impermeable dressing will sometimes afford relief. (F.)

Tr. Opii:—The following is endorsed by Hughes, of London:

Tr. Opii,	℥i.
Potass. Carbonat.,	℥i.
Aq. Bullientis,	℥j.

Apply with a soft cloth and cover with dry cotton. (Ga.)

Conium:—An ointment of the bruised leaves, or the following, for the relief of chronic rheumatism or gouty synovitis:

Ext. Conii,	℥i.
Cocainæ Hydrochlor.,	grs. v.
Atropia Sulph.,	gr. i.
Veratrinæ,	grs. xx.
Ung. Aq. Rosæ,	℥i. (Sm.)

Superheated Steam:—A hot air cylinder constructed for the purpose is used. The hand or arm is enclosed in asbestos and inserted into the cylinder. A thermometer is also inserted through a small hole in the tube; care must be exercised that it does not come in contact with the limb. The initial temperature does not usually exceed $70^{\circ}\text{C}.$, and is increased according to the endurance of the patient; most patients being able to endure a temperature of $120^{\circ}\text{C}.$ without much discomfort. Profuse perspiration always occurs and the air in the cylinder is soon saturated with moisture. It is believed that this must be the condition in all forms of apparatus, on account of the ordinary laws of osmosis. Of course the skin does not attain anything like the temperature of the air in the cylinder, and it is probably protected by the layer of gas formed from the evaporated perspiration. The healing factors seem to be the perspiration and the increased activity of the circulation. This diaphoretic action is not limited to the parts treated, but it may affect the whole body. The usual immediate results are relief of the pain, then increased activity of movement and loss of the feeling of weakness. (M. M. W., 5, 17, 98.)

Liniments:—Chloroform, Aconite, Belladonna, Turpentine; also the following combinations:

Ol. Gaultheriæ,	
Ol. Olivæ,	
Lin Sapo.,	
Tr. Aconit.,	
Tr. Opii,	āā ʒii.

Ol. Cajuput,	
Tr. Opii,	āā ʒii.
Ol. Terebinthinæ,	ʒiv.
Lin. Ammoniacæ,	ʒi.

Lin. Aconiti. (B. P.),	
Lin. Belladonnæ,	āā ʒii.
Glycerinæ,	ad. ʒii.
Chloroform,	
Tr. Aconiti rad.,	
Ol. Terebinthinæ,	āā ʒss.
Ol. Sassafras,	M. v.
Lin. Sapo. Camphorat.,	ʒiiss.

Electricity:—In the form of faradism, is often of positive benefit. (Bt.)

Pine Needle Baths:—A preparation sold in the markets ready for use, or the oil in the proportion of 1 minim to a gallon of water, form an agreeable and useful bath. (F.)

Turpentine Baths:—5–10 ounces to a bath tub full of water.

Alkaline Baths:—May be used when the natural water of a mineral spring are not available.

Hot Air Baths:—This method is often productive of good results, but is contra-indicated when there are organic cardiopathies. (F.) The limb is encased in a specially prepared cylinder containing air at a temperature of 150° F. and gradually increased to 240°. (F.) The application is continued for forty to forty-five minutes. (Sj.)

Arsenical Baths:—Prepared by dissolving from 15–45 grains of sodium arsenite and 3 ounces of sodium carbonate in a bath tub full of water. They are useful in rheumatic arthritis, and may be administered daily or every other day. Thirty baths, it is said, will relieve articular pain and stiffness. Gastric disorders may appear at the beginning, and the pain at first may be aggravated, but on discontinuing the sodium carbonate these symptoms disappear.

Turkish Baths, Warm Sea Water, Sulphur Mud Baths:—Those of Schwalbach, Nauheim, Marienbad, St. Armand, Franzenbad are all useful; when there is cardiac disease the temperature must not be too high or the bath too long.

Mineral Spring Baths:—A great number are recommended for the treatment of the rheumatic diathesis and for chronic forms of the disease. A few of the better known are Richfield, Virginia, Hot Sulphur, Mt. Clemens, and Glenwood. Great benefit is often derived from a course of treatment at one of these resorts.

MUSCULAR RHEUMATISM:

Heat:—This is very effective in many forms, viz: **Hot Water Bag or Bottle**, Ironing the part with hot flat iron, while protecting the skin with a piece of flannel; **Hot Douche**, **Hot Fomentations of Flaxseed Meal and Laudanum**, Flannels wrung out in hot water and covered with oiled silk to retain heat, and **Mustard Fomentations**.

Cold:—Sometimes useful, though heat is generally more agreeable. **Methyl-Chloride Spray** is said to cure in lumbago and pleurodynia, according to Bareholm, almost immediately. (B.) **Ether** is also employed for the same purpose, the relief being sometimes permanent. (R.)

Salicylic Acid:—A 2 per cent. ointment freely rubbed in the skin has given good results in subacute and obstinate cases. (An.)

Ether or Chloroform:—A few drops subcutaneously in old cases is very beneficial. (B.)

Massage:—One of the most effective agents; the application of a stimulating liniment may be combined with advantage.

Liniments:—The various anodyne and stimulating liniments are all used, the ones most useful being turpentine, chloroform and belladonna. (L. T.)

The following is highly praised for muscular rheumatism, lumbago and sciatica:

Sod. Salicylat.,	℥ ss.
Ol. Cajuput,	℥ ss.
Ol. Eucalypt.,	M. xv.
Lin. Sapo.,	℥ ss.
Spts., Rect.,	℥ vi. (T. 97.)

Also,

Lin. Chloroformi,	℥ iii.
Tr. Iodi,	
Tr. Aconit., Rad.,	āā ℥ ii.
Tr. Opii,	℥ ss. (Sn.)

Iodine:—The tincture painted on is sometimes of service, and the ordinary ointment when there is more tenderness of the muscles than of the skin. (R.)

Capsicum:—Steep a handful of crushed pods in half a pint of hot water for twenty-four to thirty-six hours, then strain and bottle for use. Soak a piece of lint in this liquid and apply to the affected part, which should be covered with oiled silk. It does not vesicate, and will relieve in a most striking way. (R.)

Anodyne Colloid:—Often affords quick relief; if pain continues a piece of absorbent cotton, wet with warm water, should be placed over the film. (F.) (See Neuralgia.)

Morphine:—Hypodermically over the seat of pain will often cut short an attack if seen early. (An.)

Belladonna:—The plaster or ointment (the latter preferable). (Al.)

The following also is used:

Ung. Belladonnæ,	
Ung. Iodi, Comp.,	āā ℥ ss.
Rub in twice a day and apply heat.	(Sn.)

Theine:—Hypodermically, in doses of gr. $\frac{1}{5}$ has been used with success. (F.)

Osmic Acid:—Hypodermically in doses of 8-10 drops of a 1 per cent. solution, deep in the muscle. (F.)

Strapping:—This will be found of service in pleurodynia; the involved muscles may be treated by complete rest by strapping the side as in fracture of the rib. (Ty.)

Aquapuncture:—Has been successfully employed.

Braunscheidtismus:—An old remedy, will sometimes afford instant relief. (B.)

Paquelin Cautery:—Applied gently and rapidly over large surfaces, is said to “act like magic.” (L. T.)

The practical use for such a heroic remedy would seem doubtful.

Hydrotherapy:—Warm or cold pack, Turkish baths, hot air baths, sulphur and other mineral springs (as advised in chronic rheumatism).

Electricity:—Either in the form of galvanism or faradism, is useful in chronic cases.

RHINITIS.

ACUTE RHINITIS—CORYZA.

Menthol.—One of the most frequently employed remedies for this condition. It is given first importance by Lennox Browne, being preferred by him to cocaine. He advises its administration by any one of the following methods:

1. A 10 per cent. solution in almond oil, in liquid vaseline, or in one of the many odorless paraffine compounds, to be sprayed into the nose or about the room.

2. By placing 1–2 drachms of the oily solution in a Lee's steam draft inhaler or a bronchitis kettle.

3. To carry a Cushman's pocket menthol inhaler. (The most convenient method).

The vapor of the following combination, inhaled from a wide-mouthed bottle or pocket inhaler, will add to the comfort of the patient: Oil of menthol, 1 drachm, with carbonate of ammonia, half an ounce; also, oil of menthol, 1 drachm, with 2 drachms each of camphor and carbonate of ammonia.

Menthol Chloroform:—In the strength of 10 per cent., for the purpose of aborting. Place a few drops on a handkerchief, and take about five deep inhalations. The secretions are at first increased, but afterwards diminished. (T. 97.)

Carbolic Acid:—A popular German remedy, called Hager's, is as follows:

Acid. Carbolic,	℥i.
Alcohol, Fort.,	℥ij.
Aq. Ammonia, Fort.,	℥i.
Aq. Destill.,	℥ij.

To be used as an inhalation from an open-mouthed bottle.

Half an ounce of a 1–20 solution to a pint of water is useful in washing out the nose. (T. 96.)

Steam Inhalations:—Always grateful; following may be added to boiling water in about the proportion of a teaspoonful of the mixture to half a pint:

Tr. Lupulin,	℥i.
Tr. Benzoni Comp.,	f ʒvjj.

Or,

Camphoræ,	℥ss.	
Ol. Eucalypti,	M. x.	
Terebin.,	M. xij.	
Alcohol,	ad. ʒij.	(Bn.)

Camphor:—An old and well-tried remedy; the spirits may be inhaled from a bottle, or when added to boiling water in some of the combinations as mentioned.

Chloroform:—One drachm may be added to the benzoin inhalation above mentioned, to increase its sedative action. (Al.)

The following are to be employed with the atomizer:

Calendula:—Very useful after operations about the nose, viz:

Succus Calendulæ,	℥jss.	
Ung. Ol. Liq. Albolene,	℥ij.	(Tn.)

Cocaine:—Is used for controlling the venous turgescence. It is claimed that it has more than a palliative action. Applied every three or four hours it may arrest or control the attack; the following formulæ are recommended:

Cocain. Hydrochlorat.,	grs. xx.	
Morphinæ,	grs. ij.	
Aquæ,	℥i.	
Ft. Sol. et adde		
Cosmolin. Liquid.,	℥i.	
Apply with a Burgess atomizer.		(Bos.)
Cocain. Hydrochlorat.,	grs. v.	
Ol. Eucalypti,	M. xx ad. fl ℥i.	
Vaselini <i>vel.</i> Lanolini,	ad. ℥i.	

Mackenzie recommended the following effective combination:

Menthol,	grs. v.
Pinol,	M. v.
Benzoinal,	℥i.

Snuff Powders:—Are very often used, but are not as effective as sprays. Moreover, to some very sensitive mucous membranes the effect of a powder is not as agreeable as a spray.

The following are recommended :

Morphinæ Hydrochlorat.,	grs. ij.
Pulv. Acaciæ,	℥ ii.
Bismuth. Subnit.,	℥ vi.

This is known as "Ferrier's Snuff." In using preparations of morphine it must be remembered that the drug can readily be absorbed by the nasal mucous membrane :

Antipyrin,	grs. xii.	
Camphor,	grs. x.	
Sac Lac.,	ad. ℥ iii.	(Bn.)
Cocain. Hydrochlor.,	grs. iss.	
Menthol.,	grs. iiss.	
Acid. Salicylic.,	grs. viii.	
Acid. Boric.,	℥ i.	
Amyli,	℥ iss.	

A pinch every two hours after blowing the nose.

Cocain. hydrochlorat.,	grs. $\frac{3}{4}$.
Bismuth. Salicylat.,	℥ ss.
Pulv. Camphoræ,	℥ i. (T. 96.)

Eucalyptus:—Infusion of the leaves for washing out nostrils, or the oil a few drops on cotton inserted into the nostrils for the relief of the sensations of fullness.

Chamomile:—Infusions with a little alum introduced into the nostrils, is very useful for the coryza of infants. (T. 7.)

Boric Acid:—An ointment made with vaseline in the strength of 10 per cent. for application to the nose when there is irritation. (T. 96.)

Lemon Juice:—The hands are rubbed with some drops of the liquid, and are then held in front of the mouth or nose, while deep inspirations are taken. The sneezing is said to cease after the first few inhalations. (T. 96.)

Hot Foot Bath:—At bed time, in conjunction with copious draughts of cold water during and after bath to induce free perspiration, when promptly carried out will often avert a cold in its incipient stages. (Rd.)

To Diminish Excessive Sensitiveness to Cold:—1. Free exposure to the open air, daily. 2. The morning cold bath. Cold sponging over the entire surface of the body, the plunge bath, or the shower bath, are invaluable methods of protecting the body against injury from exposure to changes of temperature. Taken regularly in the morning, the cold bath inures the surface of the body to a greater degree of cold than it will probably encounter during the day; at the same time it promotes a vigorous capillary circulation, which is essential to the harmonious and healthy working of the system. 3. Breathing through the nostrils. Infants should be taught to breathe through the nostrils, especially during sleep. (Rd.)

SIMPLE CHRONIC RHINITIS:

Cleanliness:—Is the first essential; the nasal cavities should be thoroughly and carefully cleansed of all mucus accumulations before local remedial agents are applied. The following are effective for this purpose, using the condensed air apparatus, but the nasal atomizer may be employed by the patient at home: Seiler's antiseptic tablets, Dobell's solution and benzoic acid, grs. x, with 2 drachms each of chloride of sodium and bicarbonate of soda; half of this powder being added to a glass of water. Or, Borax, 2 grains to the ounce of water, together with a little glycerine, may be used. (Bp.)

After the nasal cavities have been cleansed alterative or astringent applications should be employed, according to the indications; these, generally speaking, are of two varieties, liquids, including oleaginous preparations, and solutions, and insufflating powders; the former should be applied in the form of a spray by means of the compressed air apparatus.

Liquid Applications:—The petroleum oils form the menstrum for the oleaginous compounds, viz: Albolene, Benzoinol, Cosmoline, Lanolin, liquid Vaseline, etc. In these some medicinal agent is dissolved, usually in proportion of 1–10 per cent.

Camphor.-Menthol:—10 per cent. in lanolin is a serviceable remedy; it relieves stenosis, and congestion, and prepares the body for the two succeeding formulæ:

Calendula:—4 parts, hamamelis 8 parts, pinus strobus 8 parts, lanolin 80 parts. (Bp.)

Hydrastis:—1 drachm of tincture to the ounce of water is useful when there is a tenacious, stringy mucus dropping from the posterior nares.

Menthol Crystals:—grs. v–x, Albolene, ʒi . (Ty.)

Terebene:—Gtts. x, Albolene ʒi , applied twice daily, is one of the most effective applications. (Bp.)

Cocaine:—A 4 per cent. solution will relieve when there is considerable temporary swelling of the mucous membrane. (Iv.)

The following solutions are also serviceable for application with the atomizer:

Ext. Pini Canaden.,	gtts. xx.
Glycerini,	ʒii .
Aquæ,	ʒi . (Qy.)
Or,	
Thymol,	grs. x.
Eucalyptol,	grs. xx.
Menthol,	grs. xxx.
Oil of Cubebs,	grs. xl.
Oil of Rose, a sufficiency.	
Benzoinol,	ʒiv .

Or,

Thymol,	grs. ss.	
Alcohol,	3 ss.	
Glycerini,	3 iss.	(F.)
Water,	3 i.	

Or,

Acid. Carbolic,	grs. ii-v.	
Aquæ,	3 i.	(Al.)

Insufflating Powders:

Aristol:—Alone, or in combination with **Boric** or **Tannic Acid**, forms a very astringent powder.

Cerium Oxalate:—20 grains to the ounce of acacia, for catarrh in children.

Cubebs:—In fine powder.

Euophen:—For catarrh of children, and for reducing hypersecretion following surgical operations.

Salicylic Acid:—Mixed with some indifferent medium in equal proportions.

Potass. Sozoiodol:—Equal parts with talc, or in proportion of 1-2, is highly commended.

Sodium Sozoiodol:—In the proportion of 1-2 with talc, especially when discharge is muco-purulent. (Al.)

Gallic Acid:—4 grs, with acacia, 2 grs., after cleansing with solution of bicarbonate of soda, one of the best applications. (Iv.)

Tannic Acid:—2 parts, iodoform, 1 part, carefully triturated. (F.)

Zinc Oxide Iodid.:—15 grains to the ounce of some indifferent powder. (F.)

Cauterization:—When engorgement of the turbinate bodies produces swelling of these structures and consequent constriction of the nasal passages, the cautery is indicated. The galvano-cautery should be

used touching the sensitive areas as practiced in hay fever. (Ing.)

In absence of the galvano-cautery, normal cauterants may be use, as mentioned for the treatment of hypertrophic rhinitis. (Bp.)

Sea Bathing and Sea Water:—Often very beneficial. (Iv.)

Ethyl Chloride:—5–20 drops on a handkerchief, inhaled, has a good effect. (B.)

Bougies:—Act in two ways, namely, by retaining the medicinal agent in contact longer, and by exerting pressure; a small piece of cotton should be placed in the nostril to prevent flow of mucus. (Al.)

ATROPHIC RHINITIS:

Thorough cleansing is the first requirement. This is best accomplished by detergent alkaline sprays, as **Dobell's Solution**, **Seiler's Antiseptic Tablets**, solutions of **Boric Acid**, or **Borax**. Crusts not removed by these agents may be brought away by means of a probe wrapped in cotton and dipped in vaseline.

Hydrogen Peroxide:—When the crusts of inspissated mucus are difficult to dislodge, they may be softened by pledgets of lint soaked in the peroxide and inserted into the nostrils. (Bl.)

Galvano-Cautery Electrode:—Is used for the removal of the crusts. The electrode is introduced cold, put in contact with the crusts, which, when the current is turned on, adhere with great tenacity to the heated electrode and are then removed with ease. (Bn.)

After cleansing, the mucous membrane is ready for the application of some alterative or astringent

agent, which will vary in strength according to the sensitiveness of the parts.

The following cleansing deodorant, antiseptic and alterative remedies are for application by the atomizer or condensed air spray apparatus.

Thymol:—Is a useful deodorizer and cleanser, but does not have any great influence on the course of the disease. The following is grateful: Thymol, 10 grains; eucalyptol, 20 grains; menthol, 30 grains; oil of cubeb, 40 grains; oil of rose, a sufficiency; benzoin, 4 ounces. The solution may be used stronger or weaker as the condition requires. A solution stronger than 5 per cent. is seldom, if ever, required. (F.)

Ichthyol:—Gtt. xx—xxx; albolene, ʒi.

Mercuric Bichloride:—Grs. ss; albolene, ʒi.

Potass. Permang.:—Grs. v; aque, ʒi; especially when discharge is persistent is a good deodorizer, but not as lasting as some others. (F.)

Camphor Menthol:—10 per cent. solution in lanoline when odor is very foul. (Bp.)

Thiol:—In the following combination, by means of oil atomizer, three or four times a day: Powdered thiol, grs. x; menthol, grs. v; liquid blacol, ʒi. (T. 98.)

Pheno-Salyl:—Sol. 1-1000, with a little salt. (T. 98.)

Creoline:—Sol. 1-1000. (Al.)

Hydrastis:—Fld. ext., ʒi; aq. destill., Oj. (B.)

Labarraque's Solution:—In strength of 15-20 drops to the ounce is most useful for correcting odor. (Al.)

Zinc Sulphate:—Weak solutions have been used to cleanse. (F.)

Iodine:—In solutions of varying strengths is of great service. One of 4 per cent. in lanolin, and also the following may be mentioned: Iodine, grains 5; iodide of potash, grains 10; glycerine, 1 ounce; dilute with water as condition demands.

Alcohol:—Diluted according to the susceptibility of the patient, forms one of the simplest and best applications. (Bn.)

Nasal Douche:—In addition to the spray, the patient should use once a day, by means of the nasal douche, one or two quarts of hot water with salt, a half ounce to the quart; the water should be used as hot as can be borne. (Bos.)

The following powders may be given by insufflation:

Aristol:—With Zinc Stearate Compound.

Euophen:—Especially in scrofulus children; **Nosophen**; **Iodo-Tannin**; **Calomel**, grs. v; **Sac. Alb.**, $\bar{3}$ ss; **Zinc Zozoiodate**, 1 part; with **Talc.**, 10 parts, when an excitant action is desired.

Nitrate of Silver:—Of great benefit. Solutions vary according to the sensitiveness of the mucous membrane; 10–40 grains to the ounce are recommended, applied with cotton applicator every second or third day with lengthening intervals. (Ty.) At home the patient should use in the morning the following spray:

Hydrarg. Bichlorid.,	gr. i.
Aq. Laurocerasi,	$\bar{3}$ iii.
Aq. Destill.,	Os.

in the evening; the same followed by this ointment:

Hydrarg. Oxidi Flav.,	grs. vi-x.
Ol. Bergamont.,	grs. vi.
Vasellini,	$\bar{3}$ i.

Susceptibility of some patients to mercury, especially in the nose, renders caution necessary. The applications, therefore, may be weaker. (Bn.)

Iodoform:—In the form of bougies or wafers containing 2-5 grains, or 1 grain by insufflation. (Al.)

Trichloroacetic Acid:—10-15 per cent. aqueous solution applied two or three times a week by means of cotton covered silver probe, and rubbed on points. (Sm.)

Balsam Pine.—Cotton tampon, soaked with the remedy and carried into nasal chambers. (Al.)

The following ointments are commended:

Europhen:—10 per cent. ointment on cotton tampons, left *in situ* half an hour.

Hydrarg. Oxidi Flav.:—10 grs. to fresh lard, 1 ounce, applied on septum when there is bleeding or ulceration. (Ty.)

Calendula or Hamamelis Cerates:—To the septum for bleeding ulcerations. (Ty.)

Creosoti:—With oil of anise, each 10 drops; vaseline, 1 ounce; a small portion in nostril forms a useful application. (Sm.)

Galvanism:—Dr. Delevan recommends the following: The positive electrode is placed on the nape of the neck, and the negative, wrapped in absorbent cotton, is applied directly to the nasal mucous membrane; the strength of the current is four to seven milliampères, and the duration seven to fifteen minutes or until a watery secretion is induced; excellent results are claimed. (Bos.)

Galvano-Cautery:—Recommended by Lennox Browne, Sajous and others. The electrode is applied at various sittings to successive portions of the mu-

cous membrane so as to produce as many small eschars as possible; insufflation of iodoform or iodol may follow the applications. The use of the galvanocautery is regarded by other writers as a measure to be employed only with great caution, as it is capable of doing much harm. As a stimulating agent it is regarded by Bosworth as productive of good results in the earlier stage if applied with great care.

Vibratory Massage:—Applied as follows: A piece of absorbent cotton, loosely torn from roll, is inserted into the inferior meatus, completely filling it, and the space between the middle of the inferior turbinate bone and the septum. The dry cotton is held on the holder, and vibratory movements are carried over the mucous membrane of the inferior, middle and superior tubinated bodies, pharynx, septum and floor of nose. From 3-6 pledgets of cotton are necessary in each nostril in order to cleanse. The mucous membrane after the massage looks pink and clean, and there is a feeling of relief. Immediately afterward some such application as 10 per cent. iodoglycerine may be made. Applications are to be made daily. (Bp.)

Electrolysis:—Claims have been asserted for a large percentage of cures with bi-polar electrolysis. 20 milliampères for 20 minutes at each sitting, copper needles being used and inserted into the submucous tissues. (T. 98.)

Sea Bathing: —Often of great benefit, both from its local and constitutional effect; residence by sea is also beneficial. (Bos.)

HYPERTROPHIC RHINITIS:

In the earlier stages spray applications will be found of great benefit, and will often arrest the progress of the disease; they must be applied with care and thoroughness under the fullest illumination and inspection. A large number of formulæ have been suggested, of which the following may be mentioned:

Fld. Ext. Hamamelidis, Destill.,	
Aq. Rosæ,	āā ʒii. (Bn.)
Acid. Carbolic.,	grs. iii,
Sod. Bicarb.,	grs. xii.
Sod. Biborat.,	grs. xxx.
Glycerini,	ʒss.
Aquæ,	ad. ʒvi. (Bos.)

Acid. Borici:—Grs. x-ʒi.

Zinc. Sulpho. Carbolat.:—Grs. ii-ʒi.

Resorcin:—Grs. v-ʒi.

Petroleum preparations, such as **Albolene**, **Benzoinal**, **Glycolene**, etc., may be substituted for aqueous solutions when there is great irritability. Various remedies may be combined with these oils with good effect, the most useful being **Oil of Eucalyptus**, **Oil of Sassafras**, **Oil of Pine Needles**, and especially **Menthol**, the strength being from 2-6 grains to the ounce of the petroleum base. (Bn.)

Iodine:—In cases of moderate fibrous thickening applications to the turbinated bones are valuable. Solutions of the crystals, 10 grains, with potassium iodide, 40 grains, to glycerine, 1 ounce or from 2-5 drachms of the tincture, with enough glycerine to make 1 ounce. An applicator covered with cotton should be used. (Bn.)

When the above line of treatment, combined with proper hygiene and internal remedies, has proved ineffective and more energetic measures are required, the following should receive consideration:

Chromic Acid:—Soft and vascular enlargements are best removed by this agent, not used as a general escharotic but according to the following manner:

First apply cocaine, 5 per cent. solution, to contract and anæsthetize the parts to be operated upon. This may be done by inserting small pledgets of cotton, saturated with the cocaine, between the septum and turbinates, allowing them to remain 5–10 minutes; the chromic acid is now to be applied, using it on the end of a small probe in the form of a fused bead or a few crystals on a tightly wound strip of moistened cotton. The application is made to the point of greatest hypertrophy, and should be kept applied about fifteen or twenty seconds. After this the mass should be sprayed with an alkaline solution, such as Dobell's. The cauterizations should be repeated at intervals of seven to twelve days until physiological respiration is attained. In the intervals sedative sprays should be applied. (Bn.)

Another method of applying chromic acid is to incise the mucosa, separate it from the erectile tissue by means of a flat probe or spatula, and then insert a probe with the fused acid on its tip. (T. 98.)

Trichloracetic Acid:—Has been strongly advised. An aluminum rod, with a hollow in its distal extremity in which a few dry crystals are placed, is used. Applications are made in the same manner as with chromic acid. It is claimed there is little, or no, inflammation, reaction, and the eschar is dry and aseptic. (Bn.)

Galvano-Cautery: — When decided fibro-elastic changes have taken place, more energetic treatment is required; for these conditions the galvano-cautery is the best method; with it there is no reaction, and no difficulty in limiting the amount of destruction. The application may be repeated every three or four days, or as soon as the eschar has disappeared. (Bos.)

Snare or Electric Trephine (Whiting): — These methods are to be preferred for reduction of hypertrophy of the turbinated bones. (Iv.)

Septal hypertrophies are best treated with the **Saw, Dull Chisel, or Knife.** (Iv.)

When fibro-ellastic changes have progressed so far that much of the turbinated tissue has become tendinous in structure the outlook for cure is unfavorable, though much can be accomplished in securing comfort and arresting the progress of disease. The use of alterative sprays, such as those agents mentioned under chronic rhinitis, especially solutions of **Thymol, Zinc Iodide, and Zinc Sulpho-Carbolate,** are of great value. They must be applied at first daily and toward the end of four to fourteen months' treatment once a fortnight. The **Snare or Curette** should be used in this stage to remove myxomatous and papillomatous tissue. (Bn.)

Faradism:—Is valuable in the advanced stages, using a straight nasal electrode, long enough to reach the pharyngeal wall when introduced through the nostril. The current should be carefully applied.

General hygienic measures are of great importance.

Exercise:—Riding, bicycling, regular and frequent bathing, daily sponging face, neck and chest with cold water. Forceful efforts to clear the nostrils are to be avoided, as they increase the general irritation.

The matter of clothing should receive attention, care being observed that it is sufficiently warm for the season. "Catching cold" should be carefully guarded against.

RING WORM.

(See Trichophytosis.)

SCABIES.

Before attempting any of the various methods of treatment, the condition of the patient's skin must be considered. If highly irritated or covered with an inflamed eruption, it must be treated with **Bran Baths**, **Soothing Ointments**, such as **Zinc Oxide** or **Bismuth Subnitrate**, in the proportion of 1 drachm to 1 ounce of **Ung. Aq. Rosæ**. As soon as the skin is in condition; one of the following methods may be employed (B. H.):

Sulphur:—A time-honored and effective remedy is used in various forms and combinations. An ointment of 2 drachms to the ounce is recommended by Kippax, applied in the following manner: The patient first takes a hot bath with plenty of soap; then the ointment is rubbed in thoroughly over the whole body, and allowed to remain on over night, and in the morning another hot soap and water bath should be taken; the same programme is followed every night until every trace of itching has disappeared. In the majority of instances three days will effect a cure. (Kp.)

Fourneir recommends for private practice a preliminary rubbing with good toilet soap; then the application of Bourguignon's ointment, which is as follows:

Glycerine,	200 parts.
Gum Tragacanth,	5 parts.
Sublimated Sulphur,	100 parts.
Carbonate of Potassium,	35 parts.
Oil of Lavender,	
Oil of Peppermint,	
Oil of Cloves,	
Oil of Cinnamon,	each 150 parts.

This is followed by baths and powders of corn starch. Its use is contra-indicated in adults when much excoriation is present, and should never be applied in the case of children.

The following method is that of Bazin and Hardy; it is recommended as highly effective if the patient is an adult and the skin is not over-sensitive; it is divided into three stages:

1. Patient scrubs and washes himself in lukewarm water with green soap all over, except face and head, for twenty minutes.

2. Patient then soaks in a lukewarm bath for twenty minutes.

3. Rub all over body for twenty minutes, except head and face, paying special attention to the part covered with the eruption, the following ointment known as Hardy's modification of Helmerich's pomade:

Potass. Carbonat ,	3i.
Sulphuris Præcipit.,	3ii.
Adipis,	3iss.

The ointment is allowed to remain on the surface for twenty-four hours. It should be so prepared as not to contain any undis-

solved particles of the potash. A bath is now given, and the skin, where excoriated, is dressed with Zinc Oxide (℥), Benzoin Ointment (℥), and a little starch dusted on. This, it is said, rarely fails to eradicate the disease. This application may be repeated once or twice if necessary. If any irritation of the skin remains, administer bran baths for a week or so. (B. H.)

Wilkinson's ointment, modified as follows:

Sulphur. Sub.,	
Ol. Cadini,	āā ℥ss.
Cretæ Præparat.,	℥iiss.
Sapo. Vir.,	
Adipis,	āā ℥i.

This is only fit for hospital use, as it is most disagreeable, though effective. (Ja.)

β-Naphthol:—Recommended in 10 per cent. ointments, or in the following combination:

B-Naphtholi,	grs. lxxx.
Saponis Viridis,	℥ss.
Cretæ Alb., Pulv.,	gr. j.
Adipis,	℥i.

Apply every morning for five or six days and administer a bath every second day. (Kap.)

It is well adapted to cure the eczemas which often accompany this affection. Van Harlingen says that he has used for years one or the other of the following formulæ exclusively for this affection, viz:

Pulv. Naphtholi,	℥i.
Ung. Adipis,	℥i.

Or,

Pulv. Naphtholi,	℥jss.
Saponis Viridis,	℥v.
Cretæ Alb., Pulv.,	℥i.
Axungiaë,	℥x.

The latter is adapted for coarse skins.

Balsam Peru:*—Is recommended for young children and infants and for feeble patients with secondary eruptions. For children:

Balsam Peru,	℥iii.	
Ichthyol.,	℥ss.	
Lanolini,	℥ij.	
Ung. Aq. Rosæ,	℥iv.	
Albolini, (Liq.)	℥ii.	(T. 98.)

Or,

Balsam Peru,		
Sulphuris,	āā ℥i.	
Adipis,	℥i.	(B. H.)

For adults:

Balsam Peru,	℥v.	
B-Naphtholi,	℥i.	
Adipis,	℥vj.	(T. 97.)

The patient is rubbed at night for fifteen to twenty minutes, and sleeps in a nightshirt impregnated with the balsam. The next morning a warm bath, with plenty of soap, is given. It is claimed the vapor of the balsam kills the parasite.

Styrax:—The use of this remedy within the last few years has been revived. The following formulæ are recommended as efficient:

Liquid Styrax,	℥i.	
Alcohol,	℥ii.	
Olive Oil,	℥i.	
Use for two frictions.		(N.)

Or,

Styrax,	℥i.	
Rectified Spts. of Wine,	℥ii.	
Olive Oil,	ad. ℥i.	

Rub the parts thoroughly, and repeat in twenty-four hours.

(And.)

* NOTE.—The use of Balsam of Peru is not wholly without danger, as this agent has been known to cause Nephritis. It should not, therefore, be used when there is any kidney lesion present or any tendency in that direction. When applied the urine should be examined at frequent intervals.

A warm bath should precede the application of the remedy. Of one hundred and twenty-four cases thus treated by Unna, albumin appeared in the urine in nine. The treatment, however, was generally successful. (N.)

The following combination with sulphur is recommended as being efficient in six rubbings:

Sulph. Sublimat.,	ʒi.	
Saponis Viridis,	ʒii.	
Styracis Liquid.,	ʒjss.	
Cretæ Præparat.,	ʒi.	
Ung. Aq. Rosæ,	q. s. ad. ʒi.	(T. 98.)

Oxynaphthoic Acid (ʒiv, with powdered chalk and green soap, each ʒiv, and lard to ʒi) or **Creolin** (ʒss to lard ʒi) are said to act very quickly without irritating the skin.

All underclothing and bedding must be burned or disinfected.

SCARLET FEVER.

High temperature does not require very active treatment unless organic or functional disturbances of the heart or brain result; as long as these two organs perform their functions naturally, the temperature may be let alone.

Baths:—For high temperature and non-appearance of eruption:

If in thirty-six hours the eruption does not develop, place the patient in a water bath at 100° for ten minutes. If there is no appearance of eruption, repeat in three or four hours. If the second bath has no effect, and especially if the temperature remains high (above 104.5°) and the patient is becoming

drowsy, a cool bath at a temperature of 80° must be administered, cooling the water gradually down to 65° . The low temperature is indicated if the fever does not fall. If the cool bath fails, or if in spite of reducing the temperature the cerebral symptoms remain, dash the face and upper part of trunk with water at 50° – 60° . For this purpose the patient may be placed upon a rubber sheet, and if convenient, a small hose, with attachments to both the hot and cold water spigots, so that the temperature can be regulated, may be played upon the patient. The value of this treatment is not alone for the reduction of temperature, but for its stimulating effects upon the depressed nerve centres. It must be administered with judgment and care, and not employed unless the temperature is 105° , and so persists, with increasing severity of cerebral symptoms. (Gn.)

In malignant scarlet fever with hyperpyrexia, cold baths must be used freely, for unless the temperature goes down the patient may die in a few hours.

Cold Packs:—Are invaluable, especially at the onset of the disease, when the eruption does not appear and the temperature is high (Rd.); they are also indicated in septic forms and those marked by permanent cerebral symptoms. (Hlt.) The packs may be repeated several times at intervals of an hour as long as the fever remains high.

They may take the place of cold baths which are not approved by some writers (Jacobi, Ashby, Wright). Holt regards cold packs as superior to medicinal antipyretics, and as almost as effective as the bath; they are also much easier to administer and less likely to excite opposition on the part of the friends. (Hlt.)

Mustard Baths:—Of great service when there is retrocession of the eruption. Use 1 drachm to the gallon. (Al.)

Sponging:—With cool or tepid water is useful in many cases when the temperature is high, and the pulse frequent and feeble. (Jac.)

Hot Baths:—Indicated when the surface and extremities are cold, pulse frequent and filiform. Strong friction should be applied in conjunction with the baths. (Jac.)

Warm Baths:—At a temperature of 95° were administered in 110 cases twice a day. Nephritis did not occur and desquamation was mild. (T. 98.)

Hot Water Enemata:—May be employed in the same conditions calling for hot baths. (Jac.)

Cold to the throat:—Is often very comforting and effective in allaying glandular inflammation. Little rubber bags of ice, or ice wrapped in dry cloths, may be used. (Ty.)

Anointing the Body with Oils:—Constitutes a useful adjuvant in allaying irritation of the skin, and during the stage of desquamation in preventing the scales from flying about. Suet, sweet oil, vaseline, or cocoa butter may be used for this purpose, the latter being preferable.

Oil of Eucalyptus:—Remarkable results are reported from the use of this remedy; the body is carefully rubbed all over with the oil three times a day for three days; then a bath was administered, followed by another anointing with the oil. Eucalyptus was also sprayed into the patient's mouth, nose and throat, and into the atmosphere of the room. (Sj.)

The following is also commended for smearing on the skin after a warm bath:

Acid. Carbolic,	3i.
Ol. Eucalypti.,	3ii-iv.
Ol. Amygdalæ,	
Ol. Olivæ,	āā 3viii. (T. 96.)

Ichthyol:—A 5 per cent. lanolin ointment is useful, when simple oily applications have failed, for severe irritation of the skin which appears to cause restlessness and high temperature. (T. 96.)

For the cleansing and disinfection of mouth, pharynx, and nares, the following solutions are used, of which the first is preferred:

Hydrogen Peroxide, 1-3.

Hydrarg. Bichlorid., 1-10000.

Carbolic Acid, 1-60.

Liq. Sod. Chlor., 1-10.

Boric Acid., 1-15.

Sanitas, 1-40.

Potass. Permang., 1-40.

Sulphurous Acid, 1-10.

Cleansing the nares and naso-pharynx may, it is said, prevent extension of suppuration to the eustachian tube. The nostrils should be sprayed with an alkaline solution and then with the following:

Menthol,	grs. xx.
Eucalyptol,	M. x.
Paraffin, Fluid,	ad. 3i.
Apply every 3 or 4 hours.	(T. 97.)

Hydrogen Peroxide:—Should constitute the sole local treatment for the otitis during the stage of inflammation. (Gn.)

Caustics:—May be required if there is much sloughing of tonsils. First cleanse the parts, then apply such agents as **Nitrate of Silver** or **Chinoline**, 2-5 per cent. in alcohol. (A. W.)

SCIATICA.

The remedies mentioned for neuralgia, lumbago and chronic rheumatism, are applicable to this condition.

SCORBUTUS.

Antiseptic and astringent mouth washes, as found under stomatitis, are applicable to this condition.

Nitrate of Silver:—One of the best applications for the ulcers. (Ty.)

Hydrochloric Acid:—For applications to the gums, viz:

Acid. Hydrochloric., Dilut., ʒi.

Mellis,

Aq. Rosæ,

āā ʒi.

Apply to gums three or four times a day. (Sn.)

Compresses saturated with **Aromatic Vinegar** or **Spirits of Camphor** are very useful for the ecchymosis and infiltration. (Rd.)

Turpentine:—The undiluted oil painted on the gums hourly will cause the buccal hæmorrhage and the hæmaturia to cease. (F.)

SEBORRHŒA.

When located on the scalp the scales must be first removed; this may be accomplished if the scales are hard by soaking the scalp over night in **Oil**, and re-

moving the softened scabs with hot water and Castile soap, or by shampooing with **Spirits of Green Soap**, using about a drachm with a sponge and considerable water; after rubbing vigorously for a few minutes, cleanse with clear warm water, and dry with a soft towel. If the scalp is sensitive a good, toilet soap should be used. After the preliminary cleansing the remedy may be applied, viz:

Carbolic Acid:—Most efficient; employ in the following combination:

Acid. Carbolic,	ʒi-ʒ iss.
Ol. Ricini,	ʒii.
Ol. Limonis,	ʒi.
Aq. Cologni,	ʒij. (Vn.)

Resorcin:—In oil or vaseline, 5 per cent., or,

Resorcini,	grs. xx.
Alcoholis,	ʒii.
Vaselini,	ʒvi. (T. 97.)

Sulphur:—Regarded as one of the most satisfactory remedies; a solution of 1 ounce to water 1 quart, is used applied to the head daily (T. 97.); a solution of 1 drachm in sweet oil 1 ounce, rubbed in the scalp thoroughly nightly for a week, wrapping the head in a towel or wearing a night cap. During the second week the applications are made every other night, and after that reduced in frequency. (Ja.) Vlemingckx's solution, as described in the treatment of acne, is suitable for the disease when located on the face.

Zinc Sulphide:—Duhring recommends the salt obtained by double decomposition, in the following lotion:

Zinc Sulphate,	
Potassium Sulphide,	āā ʒss.
Rose Water,	ʒiij.
Alcohol,	ʒiij-ʒvj. (F.)

Mercurial Ointments:—The following is for use upon the scalp:

Ung. Hydrarg. Nitrat.,	℥j-iv.
Ol. Cadini,	℥i.
Ol. Olivæ,	℥ij.
Lanolini,	℥iv.

Well rubbed in at night, and washed off in morning with borax, ℥ii, water, Oj; then a little almond oil rubbed in, or the ung. hydrarg flav. may used instead of the nitrate, with or without the oil of cade. (Ck.)

An ointment of **White Precipitate** and **Tar** is as follows:

Hydrarg. Ammon.,	℥jss.
Picis, Liq.,	℥ss.
Ung. Petrolii,	℥i. (And.)

Bronson recommends for private practice, as a substitute for sulphur, the following:

Hydrarg. Ammon.,	℥i-ij.
Hydrarg. Chlor. Mitis,	℥ij-iv.
Vaselini,	℥i. (Ja.)

Hydrarg. Bichlorid.:—A useful ointment is as follows:

Hydrarg. Bichlorid.,	grs. xij.
Spts. Vini Rect.,	℥i.
Glycerini (Price's),	℥ii.
Aq. Destill.,	℥v. (And.)

For the face and scalp:

Corrosive sublimate,	grs. ij.
Rose Water,	℥i. (Sh.)

Hydrastine:—An ointment of this remedy, recommended by Shoemaker, as follows:

Hydrastinæ Hydrochloratis,	grs. v-xx,
Naphtholi,	℥ss.
Tr. Quillaiaæ,	℥ss.
Tr. Hamamelidis,	℥ss. (Sm.)

Salicylic Acid (3 per cent. in castor oil), Solution of Chloral (1 drachm to the ounce), Tannic Acid (1 drachm to the ounce of rice powder for the face) are other useful applications. (Ja., Kp.) The latter in the proportion of ʒss-ʒi, in an ounce of vaseline, is used for seborrhœa, oleosa, on the body and scalp.

For irritation after removal of the scales, a plain dusting powder, viz:

Acid. Salicyl.,	grs. x.
Zinc. Oxide,	
Amyli Oryzæ, <i>vel.</i> Maydis,	āā ʒi. (B. H.)
Used for a few days,	

For *Seborrhœa of the Genitals*, absolute cleanliness, dusting powders and antiseptic lotions, such as those of Ichthyol, and Bichloride of Mercury, are generally indicated.

For *Seborrhœa Oleosa* use Sulphur, Oil of Cade, Ichthyol, or Resorcin in some penetrating media; the most effective of these is sulphur.

DISEASES OF SIGMOID FLEXURE AND UPPER RECTUM.

The employment of the Proctoscope and Sigmoidoscope is of invaluable service. The ability to recognize various lesions in their incipency, establishing the diagnosis beyond doubt, enables one by the prompt administration of appropriate treatment to attain excellent results. The pictures, as viewed through the proctoscope, are characteristic of neoplasms, including carcinomata and fibrous and adenoid polypi, and such non-surgical diseases as simple acute catarrh, hypertrophic catarrh, and atrophic

catarrh. In the latter conditions the treatment consists chiefly in copious **Irrigation** with saline or mild antiseptic solutions; in cases of atrophic catarrh a 5–10 per cent. solution of **Argonin** has been found to be particularly efficient, while in cases of hypertrophic catarrh the aqueous fluid extract of **Krameria** is regarded as almost a specific. (N. Y. M. J. , 2, 7, 98.)

SPERMATORRHŒA.

Sleeping in the dorsal position should, if possible, be avoided as it is apt to induce pollutions. A knotted towel tied around the waist, or a block of wood held in position by tapes and placed in the small of the back, will cause the patient to awaken when he turns.

Cold Baths:—A general cold bath, preceded by light calisthenics or massage, is often beneficial in hyperæsthesia cases with frequent pollutions. In the later periods, with anæsthesia of the parts, cold sitz baths, cold sprays to the genitals, or cold shower baths, will give good results.

Hot Sitz Baths:—In the hyperæmic stage baths at a temperature of 105° for ten minutes at bed time are indicated; after the bath the part should be carefully dried with a soft towel, avoiding all friction.

Steel Sounds:—If there is much prostatic irritability the passage of a full-sized steel sound every

* NOTE.—This entire article, with the exception of the paragraph on “Stripping of the Seminal Vesicals,” is an abstract of the treatment of this disorder, as described by Dr. Bukk G. Carleton, in his work on the subject. See Cln. in reference key.

third day or once a week is of benefit. It must not, however, be allowed to remain in the canal as advised for urethral dilatation, as unpleasant symptoms may be caused.

Stripping the Seminal Vesicles:—This method is intended to reëstablish the natural expulsive power of the seminal vesicles and ampullæ by the removal of inflammatory deposits. Fuller, who originated this plan of treatment, described it as follows: "The patient, whose bladder must be full, is directed, while standing with the knees straight, to bend the body forward at right angles; the operator now introduces the forefinger of one hand into the rectum, while with the other firm counter pressure is made over the pubes. The end of the forefinger will, in all ordinary cases, reach beyond the posterior margin of the prostate, and the bodies of the vesicles can be detected, one on each side of the posterior border of the gland. Only the lower half can be felt in ordinary instances. Firm pressure is made by the tip of the index finger, reaching as far back as possible. The finger tip should be slowly and firmly drawn along the line of the vesicle, the manœuvre being aided at the same time by counter-pressure over the pubes. The procedure may be performed several times on each vesicle. In this manner if the sac is distended some of the contents can be pressed into the prostatic sinus. After the manipulation, the urine should be voided in order to ascertain how much has been expressed. This treatment should not be repeated more frequently than once in four days. If applied too often, or with too firm pressure, active symptoms may be induced, even causing acute epididymitis. (Ful.) The finger of the operator should be pro-

tected by a rubber tip. Evidence of acute inflammation, the presence of pus in the urine voided after manipulation or increase of tenderness are contraindications.

Rectal Psychophore:—Excellent results are obtained in the same class of cases that call for the preceding method. Ice water, or alternating hot and cold water, should be used by means of Carleton's psychophore. The psychophore, alternated every fifth day with Fuller's method, will give very satisfactory results.

Intra-Vesical Douches:—These are indicated for hyperæmia or catarrh of the posterior urethra or when the bladder is involved to any extent. Valentine's modification of Janet's method may be used, or preferably a No. 12 F. catheter, sterilized, may be introduced into the bladder after the urine is evacuated, and 4–6 ounces of an antiseptic fluid injected with Janet's antiseptic syringe. As soon as there is a sensation of fullness the catheter should be withdrawn and the bladder emptied. The antiseptic solutions, which act favorably, are **Formalin**, 1–1000–10,000; **Bichloride of Mercury**, 1–12,000–20,000; **Nitrate of Silver**, 1–2000–8000; **Potass. Permang.** 1–2000–10,000. Bladder irrigations should be administered after manipulations of the ampullæ, never before.

Deep Urethral Douches:—Are of service for posterior urethral irritation. Janet's antiseptic vesical syringe, or an ordinary fountain syringe, attached to a catheter may be used, injecting from a few ounces to a pint of the selected solution every one to four days.

The solutions for this purpose are:

Nitrate of Silver, 1–500–1000.

Formalin, 1–1000.

Thalline Sulphate, 1–1000.

Iodoform *vel.* Vaseline Emulsion, 5 per cent.

Instillations:—Often of advantage; they sometimes act best when the applications are made through a soft rubber catheter, cut to $8\frac{1}{4}$ inches in length, so that the eye of the catheter when fully introduced will be located in the centre of the prostatic urethra, then with a Taylor's minim syringe from 10 minims to a drachm of the selected solution can be introduced without pain or injury. The action of the compressor urethræ muscle will prevent the flow of the solution from and into the urethra and tend to cause it to pass backward into the bladder. The Keyes-Ultzmann syringe should be employed for stronger instillations. The bladder should be quite full at the time in order to subsequently dilute the solution by the passage of the urine through the urethra.

The following strong solutions are recommended: **Nitrate of Silver, 1–10 per cent; Sulphate of Copper, 10 per cent; Tr. Iodine, Carbolic Acid, Boroglyceride, equal parts.**

When these are employed commence with one of one-tenth the strength that which it is intended to finally administer; at the first application apply 10 minims and gradually increase the strength at each sitting, repeating the application every fourth day until the desired strength or satisfactory results have been obtained.

In making instillations of weak solutions the bladder should be emptied and the solution placed in the posterior portion of the urethra, allowed to flow back into the bladder and voided, thus affording a

double application. The weaker solution for instillations are those which may be also employed for irrigation, viz:

Nitrate of Silver, 1-2000-8000.

Potass. Permang., 1-1000-10,000.

Mercuric-Bichloride, 1-10,000.

Zinc Sulpho-Carbolate, 1-1000-3000.

Carbolic Acid, 1-100-500.

If urethral instillations cause too much reaction they must be reduced in strength, preceded by Cocaine, or discontinued. When nitrate of silver solutions cause pain it may be relieved by douches of sodium chloride.

Urethral Psychophore:—With water at 40° - 50° , applied for five or ten minutes every day, or every third day. This is indicated when there is hyperæsthesia of the posterior urethra, with or without impotence, especially when the urethral discharge is free from pus. When there is anæsthesia and loss of tone hot water at a temperature of 105° - 110° may be employed with good effect. A psychophore of sufficient size to fill the urethra should be used and placed in such a position that its three distal inches come in exact relation with the local lesion, the remainder of the instrument not transmitting either heat or cold.

Dilatation of the Prostatic Urethra:—Diseased conditions in this part may necessitate this procedure in order to empty the follicles of the prostate. A prostatic dilator should be used. Carleton's instrument for this purpose will afford very satisfactory results. When it is desired to dilate the bulbous urethra at the same time Kollmann's antero-posterior dilators will answer well. Prostatic dilatations should always be preceded by urethral irrigation and followed by

douching of the bladder. It should not be repeated more frequently than once in ten days.

Ichthyol Suppositories:—Recommended for the absorption of inflammatory products in the prostatic and pro-prostatic tissues.

Electricity:—Faradism has good effects; the paste brush may be applied to the genitalia, or King's rectal electrode may be employed.

Galvanism may be used by applying the positive pole to the lumbar or sacral region and the negative to the parts by means of the ordinary electrode applied externally, or the conical steel sound. In hyperæmic conditions of the urethra the ordinary sound forms an excellent electrode. A current of 1 or 2 millampères may be administered for not longer than one or two minutes. Newman's sound will be required when the general condition of the urethra is relieved, but hyperæsthesia spots remain; under the conditions three millampères may be given.

Outdoor exercises and sports are generally advisable. Bicycling, however, should be under medical supervision; a properly constructed saddle, that is, one which does not permit pressure on the perineum, is essential. Over fatigue must be avoided and the erect posture maintained in riding. Horseback riding is not to be permitted. (H.) **General Massage** will often be found of benefit.

SPRAINS.

Heat and Cold:—In regard to the use of these agents, in which there appears to be some diversity of opinion, the following indications are given by Mr. Tubby in the *Practitioner*, April, 1897:

If the injury is seen within the first two or three hours apply cold vigorously by pouring on cold water or by the use of ice or spirit lotions; this should be kept up for ten or fifteen minutes; then wrap the limb in lint soaked in cold water or spirit lotion, place it in proper position and firmly bandage. If seen later hot applications should be frequently made, either hot water or hot vinegar and salt. Keep the joint at rest and maintain steady pressure with bandages. Before this, especially if there is much swelling, use **Friction**, the object of which is to empty the lymphatics of a certain amount of coagulated lymph. In rubbing it is always advisable to commence at the parts most distant from the joint, thus emptying the lymphatics at that part first. Not a few writers advocate the immediate use of hot applications as soon as the injury is seen.

Rubber Bandage and Hot Water:—The following plan is recommended for the relief of pain: Immerse the part in hot water, increasing the temperature until the patient becomes accustomed to the heat and the pain becomes less. The next step is the application of a rubber bandage, which is to be applied immediately after the discontinuance of the hot water. If there is laceration of ligaments, or contusion of the parts, a wet compress may be applied, over which the bandage is placed. This may be left on for twenty-four hours. In injuries of the knee it may be kept applied for several days. It should be put on hot and changed several times a day. If the skin becomes thickened or white as from a poultice omit the compress. The bandage, however, must be worn constantly, and the compress reapplied should pain succeed its removal. (Hel.)

Aspiration:—In severe injuries when there is much enlargement, and a great amount of blood has poured into the joint, it should be removed with the aspirating needle under careful antisepsis. (A.)

Strapping:—The method of Gibney and Cotterell is recommended both in early and late stages, viz:

For sprain of tarsus and ankle, take strips of plaster one and a half inches wide, and eighteen long; first strip starts at juncture of middle and upper third of leg, outer or inner side. Apply close to tendo-Achilles, carrying it across sole of the foot to the base of great or little toe; several strips are applied, covering inner or outer side of ankle. A strip is then applied with its middle at the point of the heel. The ends come to a point on the foot at the junction of the metatarsal bone and tarsus. A number of these ascending strips are applied in an imbricating manner until the entire joint is covered. These strips should be applied so as to meet in front of the ankle and make circular constriction. After strapping apply a bandage, and the patient is allowed to walk. (W. C.) This method is now much used, being highly endorsed.

Splints and Plaster of Paris:—In severe sprains reduce misplaced tendons, apply hot or cold water, and later apply splints or plaster of Paris as in fractures. After wearing these for a time they should be removed and massage employed. (W. C.)

Bandaging:—Should be used in all forms unless plaster or splints are employed. Usually sufficient in mild cases after applying compresses or lotions. (W. C.)

Compression:—Wrapping the joint in plenty of cotton and bandaging somewhat firmly, will often prove effective. (A.)

Arnica:—Very useful, the tincture of the root is to be preferred, 1 part to about 5 of water, apply with compress and bandage.

Lead and Opium Wash—An old remedy of great efficacy. The formula is as follows:

Tinct. Opii,	
Liq. Plumbi Subacetat., Dil.,	āā ʒii.
Aquæ,	q. s. ad. Oj.

Saturate a compress, squeeze out excess, and apply over all a roller bandage.

In spite of criticism, this remains one of our most effective remedies for this form of accident.

Massage:—Excellent results have been obtained in all forms of sprains and contusions, and in the injuries to the soft parts consequent upon dislocations. Applications may be made immediately or very soon after the injury. Dr. J. Robie Wood recommends that in sprains of the ankle the part be placed in hot water, and at the same time *masséd* with an upward movement, then adhesive strips, according to the method of Gibney and Cotterell, are to be applied. Massage is also of great efficacy after the subsidence of acute symptoms, when much stiffness, pain and loss of power remain, constituting under this condition our most important measure for the restoration of the limbs.

Ammonia:—The following combinations form useful liniments:

Aq. Ammoniæ,	
Fld. Ext. Arnicæ,	
Lin. Saponis,	
Ol. Terebinthinæ,	āā ʒii.
Rub in several times a day.	

Lin. Ammoniaë,	℥ ii.
Spts. Chloroformi,	℥ i.
Lin. Menthol.,	℥ ii.
Tr. Opii,	℥ i.

Rub well over the surface. (Sm.)

Hamamelis:—The aqueous extract, somewhat diluted with water, forms a most useful remedy, apply with compresses, and cover with rubber protectors.

Ichthyol:—Applied with friction, and massage is said to sometimes give satisfactory results. (Sm.)

Alcohol:—Equal parts with water, forms a useful evaporating lotion. (N.)

Tr. Rhus Tox. or **Tr. Ruta**, diluted, may be used with good effect after hot water applications. (Rd.) The various liniments, viz: **Aconite**, **Belladonna**, **Camphor**, **Chloroform**, **Soap**, and **Turpentine** are all of use.

STRANGURY.

Electro-Static Current to spine and hypogastrium has been very effective. (Cl.) **Warm Sitz Baths**, **Hot Fomentations** to perineum. **Suppositories** containing **Opium**, **Belladonna** or **Hyoscyamus**. (Bl.)

STRICTURE, SPASMODIC.

Hot Sitz Baths and **Hot Fomentations:**—If not relieved, use the **Catheter**. When this is not possible, anæsthetize and use catheter, or **Aspirate** to give immediate relief, assuring the patient that the next urination will be normal. (Cl.) **Morphia**, hypodermically, may be necessary.

STOMATITIS.

The treatment of the different varieties of this disease resemble each other so closely that they will be considered collectively. Particular attention should be directed toward securing an aseptic condition of all which comes in contact with the mucous membrane of the mouth. Every means should be employed to prevent infection. Nurses should exercise care in cleansing the infant's mouth, and avoid wounding the mucous membrane. In health antiseptic mouth washes are not necessary, but sterilized water should be used for cleansing. Gentle friction with a soft cloth is advised in thrush for the removal of the exudate in order to permit of the more perfect action of local remedies; alkaline solutions effect this purpose also. (Gn.)

Boric Acid or Borax:—1-3 percent., or stronger solutions, constitute the most frequently employed and generally effective remedies in cases of the catarrhal, aphthous, and membranous (Thrush) variety. (Hlt.) Borax with honey or glycerine is used. (Rd.)

Potass. Chlorat.:— ʒi , to water ʒiv , is one of the best local remedies for general use. (B.) In the follicular and ulcerous variety its topical effect may be obtained by giving it internally, and not allowing the patient to swallow any water for some little time after. The dose is a drachm hourly of a solution of 8 grains to 5 ounces of glycerine and water. (Jac.)

Nitrate of Silver:—1-500-1000, may be brushed on in the catarrhal forms when the tongue and mucous membrane are dry. In the aphthous variety, when

there is a tendency to superficial ulceration, a solution of 1-50 may be applied gently. Weaker solutions, as 1-500, applied daily are serviceable in Bednar's aphthæ and thrush. (Jac.)

Potass. Permang.:—When a stronger disinfectant is required, solutions of 1-250-500 with four or five applications daily. (Jac.)

Alum:—Local applications of solutions constitute one of the most reliable remedies in relaxed conditions of the mucous membrane. The use should not be prolonged on account of destructive action on teeth. (Al.) The powders or a solution zss , water zi , are used. (Ty.)

Sulphurous Acid:—Strong or diluted, as a spray.

Bismuth Subnit.:—As a dusting powder directly to the ulcers, or zi to glycerine zi .

Tr. Hydrastis:— zii , glycerine zii .

Carbolic Acid:—1 per cent. solution, as a mouth wash, or the pure acid to ulcer as an anæsthetic and cauterant.

Naphthalin:—5-10 per cent., as a dusting powder.

Labarraque's Solution in the following:

Liq. Sod. Chlorinat.,	
Tinct. Myrrh.,	$\bar{a}\bar{a}$ zss .
Aq. Rosæ,	zi .
Aq. Destil.,	zvi . (Al.)

Pyoktanin Blue:—1-500.

Sod. Salicylic.:— ziss , rose water zi .

Tannin:—Especially when the gums are spongy, zi , with aq. rosæ zii , aq. destill. zvi .

Sod. Sulphite:— zi , water zi .

Tr. Iron and Glycerine:—Equal parts, painted on ulcerations forms a good application.

Myrrh:— zi , water zvi , a little boric acid, borax, or a few drops of carbolic acid or thymol may be added with good effect.

Lemon Juice:—Properly diluted, forms an agreeable mouth wash.

Resorcin:—As a dusting powder.

Copper Sulphate:—Grs. x, water ʒi in chronic recurrent forms; the ulcers may be touched with the pure crystals.

Hydrochloric Acid:—Gtts. v, glycerine ʒss.

Baptisia:—The decoction as a mouth wash.

MERCURIAL STOMATITIS:

The local treatment of this condition does not materially differ from that of other forms. (Ty.) The reader is, therefore, referred to the previous article. The remedies to which preference should be given are Chlorate of Potassium, Alum, Myrrh, Tannin and Labarraque's Solution.

SUNSTROKE—PROSTRATION BY HEAT.

Cold Baths and Affusions:—Severe cases with high temperature should be treated with ice baths, placing the patient in a tub of water with ice floating in it, bath being at a temperature of about 44°. When baths are not convenient or deemed expedient, strip the patient, place ice on his head, and pour cold water over body. Care should be taken not to reduce temperature too fast or too low; one of 102° should be a signal for the withdrawal of cold. After the bath or cold affusion the patient should be dried, removed to a cot, an ice cap placed on the head and the body lightly covered. He should be allowed to

rest until an exacerbation indicates the need for a renewal of cold applications. (An.)

Cold Water Enteroclysis:—Useful in extreme cases when temperature remains very high; administer about 2 quarts as often as required. (Sj.)

Quinine:—Subcutaneous doses of $3\frac{3}{4}$ grs. of the bichloride; repeat in half an hour. (F.)

Counter-Irritation:—To the nape of the neck when there is evidence of meningeal irritability. (Sj.)

Morphia:—Subcutaneously, is of benefit in cases characterized by pallor of the face and weakness of the heart, that is, heat exhaustion. (B.)

Ether first, then **Caffein**, hypodermically, for collapse. (Sj.)

Venesection:—May be indicated in apoplexical cases. (An.)

Hot Baths:—If after reduction of the fever diaphoresis does not occur a bath may be administered, and possibly a hypodermic of pilocarpine in urgent cases. (An.)

Artificial Respiration:—Should be employed when there is collapse, and kept up until other measures have had time to act. (An.)

SYCOSIS COCCOGENICA.

Treatment will vary according to the stage of the disease. When acute, emollient and soothing applications will be indicated, together with cutting the hair as short as possible and the removal of scales and crusts by means of oils and fomentations.

Ammoniated Mercury:—When papules are beginning to appear two parts of the ointment with one

of vaseline are sometimes effective in arresting the progress of the disease. (Ck.)

Shaving:—There is some divergence of opinion in regard to the utility of this measure; some writers, while admitting that it enables the remedy to reach the skin with greater ease, claim that it tends to spread the infection; it is moreover painful to many. On the other hand, some dermatologists insist that it is essential to successful treatment, advising it every second or third day. When done for the first time, the hair should be clipped close and a poultice applied to soften the crusts. The lather from a carbolic shaving stick applied and left on skin over night, is, according to Crocker, a useful adjunct.

Poultices:—If there is much œdema and severe inflammation, warm fomentations will prove of benefit; in some cases, however, cold starch poultices give better results. (Ja.) A poultice made with bread and dilute lead water, applied cold, is recommended in preparing the face for shaving.

Epilation:—When there are pustulations and the beard can not be shaved, each affected hair must be pulled out and the follicles cleansed with a weak antiseptic lotion, and an ointment of resorcin or sublimate applied. This measure should only be used when the roots of the hair are loosened. (Ck.)

Lotio Nigra:—Of service when the disease is acute, and there is much pain and swelling. It may be applied every two or three hours, followed each time by oxide of Zinc Ointment, applied by means of the finger, or spread upon pieces of linen, and bound upon the parts. (Sh.)

Bichloride of Mercury:—A lotion of 2 grains to the ounce of water after epilation. (Rd.)

Lead Water and **Laudanum**, weak solutions of **Witch Hazel**, **Zinc**, and **Lead Acetate** form useful, sedative and astringent lotions for the reduction of swelling and inflammation. (Sh.)

The following wash is also of service in the acute stage:

Pulv. Zinc. Carb. Præcip.,	
Pulv. Zinc. Oxid.,	
Glycerin.,	
Liq. Plumb. Subacetat., Dil.,	āā ʒij.
Aq. Rosæ,	ʒ vijss. (Vn.)

Oils:—When there is a good deal of crusting, these preparations are indicated, viz: **Oil of Ergot**, **Olive Oil** with fluid **Mercury Oleate**, **Cod Liver Oil** alone or combined with **Arrowroot**, **Zinc** or **Lead Carbonate**, **Opium**, **Arnica**, or **Belladonna** lightly pencilled over the surface. (Sh.)

Salicylic Acid:—2 per cent. solutions in olive oil excellent for softening the crusts; apply for a day and a night; then wash with soap and water. This may also be applied at night to prevent drying when lotions are used during the day. An ointment of 10–15 grains to the ounce of **Lassar's paste** forms a stimulating application indicated when there is pustulation. (B. H.)

Lassar's Paste, **Zinc Ointment** or **Cold Cream**, preceded by **Hot Water**, sopped on for five or ten minutes twice a day, constitute excellent soothing remedies for the acute stage, especially when the face is shaved. The following are also useful applications after shaving:

Zinc Oxide,	
Zinc Carbonate,	āā ʒi.
Rose Ointment,	ad. ʒi.

Or,

Zinc Oxide,	ʒi.	
Linseed Oil,	ʒi.	(Ja.)

Ointments:—Among the most serviceable in earlier stages are: **Zinc, Lead, and Bismuth Oleates** (alone or combined with other agents), and **Calomel** (10 grains to the ounce of cold cream or rose ointment). **Resorcin, Ichthyol, or Boric Acid** may also be brought into requisition. (Sh.)

Diachylon Ointment:—Is excellent in the acute forms; a few grains of **Camphor** may be added. (Sh.) It may also be advantageously combined with other remedies, as **Oil of Cade** or **Zinc Oxide**, the latter being indicated when the disease has become chronic and requires stimulation. (B. H.)

Provan's Tragacanth Paste:—Recommended by McCall Anderson, is as follows:

Tragacanth,	
Glycerine,	āā ʒss.
Biborate of Soda,	ʒss.
Distilled Water,	q. s. .

The following combinations are useful:

Powdered Poke Root,	ʒi.	
Menthol,	grs. x.	
Lanoline,		
Oxide of Zinc Ointment,	āā ʒss.	(Sh.)

Also:

Acid. Carbolic,	grs. v.	
Bismuth. Subnitrat.,		
Ung. Hydrarg Ammoniat.,	āā ʒii.	
Ung. Aq. Rosæ,	ʒv.	
	(T. C. Vol. IV.)	

Mercurial Ointments:—Suitable when stronger preparations are demanded. They may be used when the eruption is confined to one or two points, and in

subacute and chronic cases. Combined, as in the following, with sulphur, they are effective:

Red Sulphate of Mercury,	1 part.
Sulphur Sub.,	24 parts.
Lard,	75 parts. (B. H.)

Sulphur:—Useful when disease becomes more chronic, and inflammation is less. The following wash is for subacute cases, and sometimes succeeds when other remedies fail:

Sulphur. Præcipitat.,	℥ii.
Pulv. Camph.,	grs. x.
Pulv. Tragacanth.,	℥j.
Aq. Calcis,	℥iv. (Vn.)

Pyrogallol:—A 2 per cent. solution in alcohol painted on the affected part twice a day and the application at night of the following ointment is recommended by Viell:

Sulphur Lac.,	
Alcohol.,	
Aq. Rosæ,	āā ℥i.
Mucil. Gum. Acaciæ,	M. xx-xxx. (Ja.)

β-Naphthol:—Kaposi recommends the following combination to which sulphur may be added as follows:

β-Naphthol.,	1 part.
Spts. Sapo. Vir.,	25 parts.
Alcohol,	50 parts.
Balsam Peru,	2 parts.
Sulph. Lotion,	10 parts. (Kap.)

Green Soap:—When the affection is of long standing, and there is much infiltration, a small portion, rubbed on with a little water, and then washed off, followed by diachylon ointment, is a valuable method of treatment. (Vn.)

In addition to the employment of these remedies, it is often of the utmost importance to open various lesions that may be present, and to puncture the surface thoroughly, thus relieving the enlarged and congested blood vessels, allowing stagnated blood to circulate, the effused serum to escape, and preventing the formation of pus. If there is much thickening of skin depletion is followed by decidedly beneficial results.

Massage and Static Electricity:—Serviceably employed when debility is marked. (Sh.)

The rhinitis, which is often present, should be treated with antiseptic douches. After a cure has been effected, the patient should be kept under observation for some time. He should be instructed to bathe the face daily in hot water, and apply some protective ointment. Ointments, when used, should be bound on tightly.

SYNOVITIS.

ACUTE SYNOVITIS:

Rest in the position of greatest comfort; **Mild Extension**; **Cold** application by means of **Ice Bags** or **Leiter's Coil** (Tre.); **Heat** may be substituted for cold if the latter is not agreeable to the patient; use the hot water bag, or immerse the parts in hot water. (W.)

The following is an anodyne ointment; apply twice daily with a brush:

Morph. Sulph.,	grs. viii.
Oleate of Mercury (5-10 per cent. ointment),	℥i.

Lead and Opium Wash:—Applied hot, forms one of the best applications. (Tre.)

Alcohol:—Diluted with water, equal parts, forms an excellent evaporating lotion.

Splints:—To keep the parts at rest, should be used in cases arising from traumatism. (Tre.)

Aspiration:—If there is much tension, with extreme pain, and the capsule and ligaments are in danger of being overstretched; to prevent permanent damage the joint should be aspirated under complete antiseptis. (W.)

Compression:—Equal pressure as firm as can be borne, covering the joint with cotton and bandaging, is useful after the more acute symptoms have subsided. (A.)

Carbolic Acid:—In subacute cases, when aspiration has failed to relieve, a permanent cure can ordinarily be effected by injecting through a trocar 2–3 drachms of a 5 per cent. solution. (Pk.)

Hamamelis or Vinegar are used.

CHRONIC SYNOVITIS (Compare Chronic Rheumatism):

Rest:—Of the part is essential.

Iodine:—The tincture, painted on the joint, has long been used. After its application Ashhurst recommended:

Ung. Hydrarg.,
Ung. Belladonnæ,

āā ʒi.

The following is also for painting on the part:

Iodi,
Potass. Iodid.,
Aquæ,

ʒss.

ʒi.

ʒvi.

(Sn.)

Ichthyol:—20-50 per cent. in lanolin, rubbed on the joint, which in bound in cloths covered with the same ointment, is sometimes attended with good results. (M. H.)

Mercurial Ointment:—Was used by Dupuytien in the form of inunctions, viz:

Ung. Hydrarg.,	℥ii.	
Pulv. Ammon. Chlorid.,	℥i.	(Sn.)

Carbolic Acid:—An injection of 10 minims of a solution of grs. viii, distilled water ℥i, is used, repeating every third day. (Sn.)

Pressure by an elastic bandage, **Friction, Massage**, are all of service. (Pk.)

Aspiration and Irrigation of the Capsule and Joint:—Are most effectual methods. Strict antisepsis should be followed, shave the joint and wash it thoroughly with ether, then with sublimate 1-3000, and apply an antiseptic rubber bandage around the parts, leaving a small space exposed for the insertion of the needle. An aspirator should be used for the withdrawal of the fluid, after which the capsule should be filled to distension with a sublimate solution of 1-10,000; then the same is withdrawn, and an antiseptic dressing applied, followed by plaster of Paris splints or some fixed apparatus. (W.)

Opening the Joint and Removal of Hypertrophied Tissue is followed by excellent results. (Tre.)

SYPHILIS.

Mercury:—The methods of administration other than by the mouth of the cardinal remedy for this disease are by **Inunction, Subcutaneous Injection, Fumigation, and Calomel in Traumaticin.**

Inunction.—This should be restricted to those cases where there is faulty digestion, such as catarrhal conditions of any part of the alimentary canal, where the internal administration of the mercurial preparations has not been attended with results, and where the conditions demand immediate and direct action; in the latter instance it will be found invaluable.

The ordinary **Ung. Hydrarg.** of the U. S. P. is generally used. It is very important that it should be freshly prepared; about 40 grains constitute the dosage for one application. The body is usually anointed at six sittings, as follows: The back and neck, chest and abdomen, right arm and left arm, right leg and left leg, avoiding the scrotum. Hairy parts should be avoided. If it is not possible, they should be shaved. Should that be objectionable the **Ung. Hydrarg. Ammon.** may be substituted. The inunctions are best administered by a professional masseur. The region should be first washed with soap and carbolized water. (Cl.)

Between the first and second applications there should be an interval of about five days or less; between the second and third, five to ten days; between the others, about two weeks. Hot baths should be given during these intervals. This method of administering mercury is not always well borne; some are easily salivated, while others may suffer from eczema and erythema. Patient should be carefully watched to see if any untoward effects are produced requiring a decrease or discontinuance of dose. (Cl.)

A 20 per cent. ointment of the **Oleate of Mercury** may be used; it has the advantage of being less disagreeable than the ordinary mercurial ointment, but

being more easily absorbed it should be applied with a brush and not rubbed in, at least not so vigorously. (F.)

Subcutaneous Injection.:—There is divergence of opinion among writers in regard to the advantage of the hypodermic administration of mercury. According to Martineau, its action is more rapid, more effective, and more energetic than any other heretofore proposed. (B.) On the other hand, Goodno denies that it has any especial advantage. Carleton recommends it as beneficial for many cases, but not suitable for routine practice.

The syringe used for mercurial hypodermic dosage should have rubber mountings; both needles and the point of injection should be rendered thoroughly aseptic. The subcutaneous areolar tissue of the back is the best point for injection. Irritation may be caused, and in some instances, when given improperly, abscesses may be produced. Of the mercurials recommended for this form of administration the following have been selected:

Hydrarg. Bichlorid..:—A simple solution in distilled water, 4 grs. to the ounce; 10 minims for dose daily, increased, minim by minim, until 50 have been given, or until the physiological effects have been produced. The moment the least mercurial impression is made the dose must be reduced.

In place of small doses, Shoemaker, of Philadelphia, has used injections of $\frac{1}{4}$ – $\frac{1}{3}$ grains in the gluteal region two or three times a week. This method he regards as especially adapted to these subjects, and those with broken-down constitutions, where it affords the most positive way of limiting or curing the disease.

The following solution is also employed :

Hydrarg. Bichlor.,	grs. xv.
Sod. Chlorat.,	3 ss.
Aq. Destill.,	3 iij.
Inject x-xv minims every second day.	
	(Sm.)

Albuminate of Mercury:—Prepare as follows: Corrosive sublimate 15 grains, distilled water 5 drachms; to this solution add 5 drachms of white of egg, shake thoroughly, and incorporate $\frac{1}{2}$ drachm of sodium chlorate and 2 ounces of distilled water. This mixture is again well shaken, then filtered and sufficient water added to make 4 ounces. The dose is 15–30 minims. (B.)

Amidopropionate or Alaninate of Mercury:—Is an eligible mercurial for subcutaneous use, as it does not cause irritation at the site of injection. The dose in syphilis is $\frac{1}{12}$ – $\frac{1}{4}$ grs. daily. (F.)

Asparagin Hydrargyrate:—Used recently with excellent results; dose, $\frac{1}{8}$ gr. (F.)

Fumigation:—One of the earliest methods of administration, is somewhat less reliable than inunctions, and more easily productive of salivation. It is useful in secondary and tertiary cases with ulcerations, when the eruptions are diffuse, or when the internal administration of mercury is not well borne and the patient is unwilling to submit to inunctions. It is not adapted to continuous use.

Various mercurials are employed, the **Sulphuret**, **Iodide**, and **Calomel**; the latter is best, and is generally selected. From 20–40 grains are put in a cup of water and placed over a spirit lamp, the patient is wrapped in a blanket, and so arranged that the vapor of the mercury will fall upon the skin under the blanket; or a special apparatus may be employed.

Commence with 20 grains and gradually increase, 5 grains at a time, administering every second day, watching the gums for any sign of salivation. After the fumigation, the patient should retire to bed to avoid taking cold.

Never give the fumigations after a meal or continue their use for more than a month or two. (Cl.)

Calomel and Traumaticin.—Favorable results have been reported from the following: A bath is given, then a 25 per cent. mixture of calomel and traumaticin is painted on the patient's back or, if there are syphilitic manifestations on the skin, it is applied over those surfaces. This method is peculiarly well adapted to cases when the internal administration of the drug is not well tolerated, and to hereditary syphilis in children. It has the double advantage of producing both local and general effects as well as being neat and cleanly. (F.)

SYPHILIS OF THE LARYNX:

The local treatment of simple chronic laryngitis is generally applicable to this condition. In erythematous forms of inflammation, if serious, the same treatment as recommended for acute catarrhal laryngitis should be employed. (L. B.) Mucous patches in the larynx do not appear to have the same tendency to spread as when situated on the soft palate and pharynx. If there is any indication for local treatment it should be by cauterization in the same manner as for lesion when located elsewhere. (Bos.)

Cleansing Sprays of Dobell's Solution or Boric Acid are of the first importance; these should generally be made daily.

Iodine, grs. v, to glycerine or fluid cosmoline, ʒi,

or Zinc Chloride in the same proportion; the iodine is useful when there is increase of tissue, erosion and ulcerations, otherwise the chloride is better. When ulceration is deep increase the iodine to 15 grs.

Guaiac:—gtt. j— $\bar{z}$ i, as a spray or vapor for ulceration and œdema. (Iv.)

Euophen and Iodoform:—Are excellent applications for superficial ulcerations. (Bos.)

Calomel:—By insufflation, for ulceration. (F.)

Carbolic Acid:—Grs. xx—xl—Oj, as an inhalant to correct fetor. (Al.)

Nitrate of Silver:— $\bar{z}$ i— $\bar{z}$ i, for superficial ulceration. (Bos.) As a spray, grs. v—xxx— $\bar{z}$ i. (Cl.)

Mercuric Bichloride:—Solutions of 1—1000—500, as a spray are employed in all forms of deep ulceration and gummata. (Bos.)

Chromic Acid:—Grs. x— $\bar{z}$ i. (Ba.)

Galvano-Cantery:—Is the best means for arresting ulceration of the epiglottis. (L. B.) When a thick secretion coats the ulcer it should be removed with a cotton covered probe.

SYPHILIS OF THE NOSE AND NASO-PHARYNX:

Cleanliness is one of the most important features of treatment. Each time the patient is seen the nose should be thoroughly cleansed with cotton pledgets under illumination and at home by the patient with the douche two or three times daily. If the secretions are dry and hard, spraying the nasal chambers with warm liquid vaseline before employing the cleansing wash will facilitate removal of hardened mass.

The following are suitable for cleansing purposes:

Sod. Bicarb.,	
Sod. Biborat.,	āā ʒi.
Acid. Carbolic (Calvert's No. 1.),	ʒi.
Aq. Calidæ,	ʒxx.
Ft. Sol.	
Potass. Chlorat.,	ʒss.
Sod. Bicarbonat.,	
Sod. Biborat.,	āā ʒi
Aq. Calidæ,	ʒxx.
Ft. Sol.	(Bn.)

Sod. Bicarb., Sod. Biborat., Sod. Chlorid., equal parts; of this about 10 grains to water, 1 ounce. For cleansing in mild forms of specific coryza: Sod. Salicylate. (1 per cent.), Acid Salicylate (2 per cent.), Carbolic Acid (1–2 per cent.) are solutions useful when there is much discharge with tendency to decomposition and dessication. These may be used in the nasal douche when there is ample room for escape; otherwise the nasal bath may be preferred.

Aqua Picis:—An excellent wash for frequent use. It is a good deodorizer and does not disorder the stomach as salicylic acid and salicylate of soda may do. (T. 97.)

Hydrogen Peroxide:—Forms a valuable application; it both cleanses and deodorizes in a marked degree (Marchand, 15 Vol.); 1 part to 8 of water. (Bn.)

After cleansing, a stronger detergent may be used, such as the following:

Aluminum Aceto-Tartrate, 1–2 drachms of a 50 per cent. solution to a pint of water, especially when there is ulceration and fetor. (T. 97.)

Liq. Potass. Permang., 1–4 drachms to 20 ounces of water.

Zinc. Sulpho-Carbolate, grs. xl, to water, 20 ounces.

The following formula combines solvent, stimulating and powerful disinfecting qualities:

Potass. Chlorat.,	
Ammon. Muriat.,	āā ℥i.
Potass. Permang.,	℥ss.
Aq. Calidæ,	℥xx. (Bn.)

Nitrate of Silver:—Grs. v-x-3, painted on (Bn.), or the fused drug, will cause large ulcers to heal. (Ing.)

Chromic Acid:—5 per cent. solution, painted on ulcers for stimulation and healthy reaction in the secondary form. (Bn.)

Boric Acid:—1 part, with 2 of Iodol or Iodoform, Aristol, Iodoform and Europhen for deep ulceration after the sprays. Fine Powdered Camphor as a deodorant. Accumulated débris adhering to the edge of ulcerations should be removed with forceps. The curette may be employed for necrotic tissue when necessary. All sequestra should be removed, but it is advisable to wait until separation has occurred. (Bos.)

Galvano-Cautery:—May sometimes be useful in reducing indurations. (Ing.)

In *Hereditary Syphilis of the Nose* the local treatment should mainly consist of cleansing and disinfecting lotions, as, for example:

Sodii Bicarb.,	grs. iii.
Acid. Carbolic (Calvert's No. 1.),	M. i.
Glycerini, Opt.,	℥i.
Aq. Destill.,	q. s. ad. ℥i.

In applying solutions of this nature some writers advise the use of sprays alone, considering the syringe inexpedient. The latter, however, will be found effective if the infant is placed on the nurse's knee with the face downward and the nose then syringed out:

Menthol:—1 part, **Olive Oil** 9 parts, applied with a camel's hair brush, is useful for temporarily relieving erectile swelling.

Cocaine Hydrochlorate:—If the parts are much swollen and sensitive a few drops of a 4 per cent. solution may be applied before using the syringe.

The following are useful ointments to be applied to the nostrils:

Calomelenos,	3i.
Ung. Cetacei,	3i.
Or,	.
Aristol,	grs. x.
Lanoline,	
Vaseline,	āā 3 ss. (Bn.)

SYPHILIDES:

Local treatment will be required when the lesions are situated on hands or face, and when it is desirable to hasten their disappearance on account of profuse and disagreeable discharges.

Before the application of the proper medication, all crusts should be removed by warm antiseptic solutions.

Ung. Hydrarg. Inunctions:—Are used in various syphilides with the best results.

Calomel and Traumaticin:—A bath is first given, then a 25 per cent. mixture of calomel in traumaticin is painted on where there are any syphilitic manifestations. The results are said to be very favorable in syphilides of the papular, pustular and squamous varieties, and in small circumscribed lesions. (Cl.)

Hydrarg. Oleate:—20 per cent. ointment for dry lesions.

For erythematous forms:

Resorcin,	℥ss.	
Adipis,	℥i.	(B. H.)

Or,

Hydrarg. Chloridi. Mitis,		
Pulv. Amyli,	āā ℥i.	
Hydrarg. Chloridi. Mitis,	℥i.	
Ung. Zinc. Oxid.,		
Ung. Petrolei,	āā ℥ss.	(W. M.)

For papular forms:

Hydrarg. Præcipitat. Alb.,	℥i.	
Amyli,		
Zinc. Oxidi,	āā ℥ii.	
Vaselini,	ad. ℥i.	(B. H.)
Ung. Hydrarg. Ammoniat.,	℥i.	
Ung. Aq. Rosæ,	℥i.	(W. M.)

Or,

Hydrarg. Chloridi. Mitis,		
Ung. Petrolei,	āā ℥ss.	(W. M.)

For pustular forms:—**Hot Vapor Baths**, followed by one of these ointments:

Hydrarg. Bichlorid.,	gr. i.	
Ung. Hydrarg. Nitrat.,		
Ung. Petrolei.,	āā ℥ss.	
Ung. Zinc. Oxidi,	℥vi.	
Hydrarg. Oxidi Rub.,	℥ii.	

Alkaline Baths:—Are indicated in scaly lesions, particularly those of the palms, which are difficult to cure. (B. H.)

Labarraque's Solution:—Added to wet dressing, is of service in macerating hard crusts. (Al.)

Liq. Potassa:—Pure or diluted, used on hard indurated lesions. (B. H.)

The following are also for lesions of a hard scaly character:

Ung. Hydrarg.,	
Amyli,	
Zinc. Oxidi,	
Vaselini,	Equal parts.
Hydrarg. Chloridi. Mitis,	grs. xx.
Zinc. Oxidi,	ʒii.
Amyli,	ʒii.
Vaselini,	ad. ʒi. (B. H.)

Dusting powders are of benefit, namely: **Aristol**, **Euophen**, **Euophen-Aristol**, **Dermatol**, **Calomel**, **Iodoform**, **Lycopodium**, and **Bismuth Subnitrate**. (Cl.)

Ung. Diachylon:—When a soothing application is necessary.

Mercurial Plasters:—Have excellent effect on thickened epidermis and gummata.

SYPHILITIC ULCERS (Compare Ulcers):

Aristol:—Has a remarkable influence on ulcers of this variety, and is regarded as superior to any other agent. (Sm.)

Iodoform:—Has been freely used in various forms, but is generally disappointing for open ulcerations. (Al.)

Hydrarg. Oxid. Rub.:—Equal parts with starch forms an excellent dressing when granulations are indolent (Al.), or the officinal ointment diluted in the proportion of 1 part to 8 or 10 of sulphur ointment. (N.)

Hydrarg. Salicylate:—A lotion of 5 grains of the salt, with 5 grains of carbonate of potash, to the ounce of distilled water, or an ointment of 16 grains to the ounce. (Al.)

Hydrarg. Sozoiodate:—An ointment of 2-10 per cent. or dusting powders of the same strength with talc or starch. (F.)

Lotio Flava:—A strong stimulant and detergent to foul ulcers. (Al.)

Naphthalin:—The following combination with calomel is advantageously applied:

For inflamed ulcers:

Hydrarg. Chloridi. Mitis,	grs. x.	
Naphtholini,	ʒi.	
Ung. Camphoræ,	ʒvii.	(Sm.)
Emplast. Plumbi,	ʒ ii.	
Ung. Hydrarg.,	ʒ ss.	
Ol. Cadini,	ʒ ii.	(B. T.)

For phagedenic ulcerations:

Acid. Pyrogallic,	i part.
Vaselini,	5 parts.

Or,

Acid. Pyrogallic,	i part.
Amyli,	3 parts. (N.)

For very chronic ulcers energetic treatment is required; the **Cautery**, **Acid Nitrate of Mercury**, **Chromic Acid** or **Zinc Chloride** (the last preferable) are indicated. Applications should be preceded by cocaine.

The following ointment is also useful for very chronic types:

Acid. Tannic.,	grs. lxxv.
Hydrarg. Nit. Acid.,	gtts. xii.
Adipis,	ʒviiss. (Sn.)

TATTOO MARKS.

Dr. Variot, of Paris, claims to successfully remove tattoo marks in the following manner: A concentrated solution of **Tannin** is applied to the skin, and worked in the same way as in the tattoo operation. The skin is then rubbed with a crayon or a solution of **Nitrate of Silver**, which is allowed to remain on until the tattoo marks stand out as black points on the tannate of silver. Any excess of fluid should be wiped off. The surface turns black and moderate inflammation ensues; after fourteen or fifteen days the eschar drops off, leaving a red superficial cicatrix, which after about two months will disappear. (Sh.)

TETANUS.

The wound should receive the most energetic **Antisepsis**. **Lugal's Solution** may be applied in addition. (A.)

Antitoxine:—Recent writers claim that this treatment has reduced the death rate from 80 per cent. to 37.37 per cent. (A.)

Roux and Vaillard recommend the following: The wound is first excised, then $\frac{3}{4}$ iii $\frac{3}{4}$ iii (100 c. c.) of the active serum is injected; the injection is repeated the next and the following day, and continued daily as long as symptoms last. The serum, while it neutralizes the poison in the blood, does not act upon the germs at the wound, so, unless the source of infection can be removed, the disease may return. It is ad-

visible, therefore, to keep up the injection for ten to twelve days after the disappearance of symptoms in order to guard against recurrence. (F.)

Behring's Antitoxin is undoubtedly effective in the treatment of traumatic tetanus, and should be administered in all forms. The following summarizes a recent opinion in regard to this method: 1. It is best to give it as early as possible. 2. The local treatment, which consists in a complete destruction as soon as possible of the primary lesion, must not be omitted, for it might tend to a constant supply of toxine. 3. The symptomatic treatment with sedative drugs must be pursued in conjunction with serum therapy, as it may be effective when the latter fails. 4. Old methods for eliminating the poison from the body must not be neglected. 5. The preventive treatment leaves much for further investigation. (J. M. C., 4, 16, 96.)

Hydrarg. Bichlorid.:—(Celli's Treatment.) The hypodermic injection of this drug has been attended with success. A case is reported in which, after the failure of other remedies, injection into the buttocks of $\frac{9}{100}$ grain twice daily resulted successfully. After the second dose the convulsions decreased in frequency and severity, and after the seventh ceased entirely. (F.)

Carbolic Acid:—By hypodermic injection (Bacelli's method), has been used successfully, though the exact status of the treatment remains uncertain, success has been reported from doses of $\frac{15}{100}$ grains of the acid every two hours (F.), and apparently hopeless cases recovered after the administration of 12 drops of a 2 per cent. solution injected every three hours. (Sj.)

Morphia:—Injections in the tetanized muscles give relief. (B.)

Ether Spray:—Apply to vertebral column, from three to five minutes every three-quarters of an hour, first along the spine, and later over the affected parts. (Sj.)

Ice and Cold Water:—Continuous application, or irrigation to the affected parts immediately after receiving the wound maintained night and day for one week, is recommended. (Sj.)

Hot Baths:—In conjunction with other measures are sometimes useful adjuvants. (T. 96.)

Amyl Nitrate Inhalations and Anæsthesia:—For temporary relief. (B.)

Curare:—Should be useful for its effect upon the terminal nerves, but as yet experience does not confirm it. Dose, $\frac{1}{25}$ gr., hypodermically, cautiously increased. The strength of the drug may vary. (Ty.)

Saline Infusions:—Intravenous or subcutaneous, are valuable agents. (F.)

Rest:—A most important therapeutic measure. This must be literally *absolute* in the strictest sense of the word; every sound should be excluded, the room darkened, the ears plugged with cotton, drafts of air excluded, and the attendance must be so conducted as not to cause the slightest noise. (Gn.)

TRACHOMA.

This disease exists in so many varying degrees of severity, and the classification of its types, according to different writers, presents such a divergence, that a concise summary of the plans of treatment is difficult.

For those cases attended with intense photophobia, lachrymation, vascular keratitis, and even iritic disease, which appear in all grades of severity, the following preliminary treatment is recommended by Roosa:

Hot Water:—This should be employed as a fomentation, using absorbent cotton dipped in boiling water, applied continuously to the eyes for twenty minutes about six times a day.

Sulphate of Atropia:—Instillations three to six times a day of a solution of the strength of 2 grains to the ounce.

Scopolamine Hydrobromate:—Instillations of a solution, 1 gr. to the oz., may be substituted for atropine, if desired.

Cocaine Hydrochlorate:—If this is successful in relieving the photophobia it may be repeated, using considerable quantities from four to six times a day; the solution should contain 8 grains to the ounce. These measures, if successful, will lessen the photophobia and lachrymation, and prepare the eyes for the use of astringents, of which **Tannic Acid**, in the form of a spray, or **Alum Crystals**, applied once or twice a day, are recommended as the best with which to begin. (Ro.)

Sulphate of Copper:—If the disease gradually yields to the above line of treatment this remedy, in the form of the crayon or crystals, may be applied once or twice a day, and the result in a few weeks, even in the most obstinate cases, will be satisfactory. (Ro.) Sulphate of copper is generally regarded as one of the best preparations for ordinary forms in which there is little, if any, purulent discharge, and where there is considerable thickening of the conjunctivæ. The

effect can easily be regulated from a slight to an almost caustic action according to the heaviness of the touch. Applications should be repeated from every other day to once or twice a week; every part of the conjunctivæ within reach should be touched, including the retrotarsal folds. (N. O.)

The following antiseptic lotions applied to the everted eyelids are recommended:

Hydrarg. Bichlorid., 1-1000.

Carbolic Acid, grs. vi, Glycerine, ʒi.

Formalin, 1-1000-2000. (Bl.)

Tannic Acid:—Solutions in glycerine from 10 grains to the ounce up to a saturated solution are very effective. In chronic intractable cases they may be used twice a day, a drop in the conjunctival sac. (Ro).

A solution of 15 grs. to the oz. is also recommended for painting on the everted eyelid. (Bl.)

Nitrate of Silver:—The crayon should never be used under any circumstances; the mitigated crayon (equal parts of nitrate of silver and nitrate of potash) and the solution, grs. v-x-ʒi, should be limited, if used at all, to cases where there is marked purulent secretion. (N. O.)

Ichthyol:—Is said to have excellent effect, viz:

Ichthyol.,	5 parts.
Distilled Water,	4 parts.
Glycerine,	1 part.

The everted eyelids are painted with the mixture, which is permitted to remain on from sixty to ninety seconds, then washed off with water. It is indicated at every stage. In children a 30 per cent. solution may be used. (T. 98.)

Jequirity:—Burnett says this remedy is now very little used because of its danger to the cornea, which is liable to become ulcerated unless the pannus is

very dense. Roosa, however, says he has used it a great deal, and in no case was there damage to the cornea. The same writer recommends that the remedy first be converted into a powder. The patient is under the care of an attendant, and the powdered drug, to the amount of a grain, is applied to the palpebral conjunctiva. In most cases there is reaction, consisting of pain in the lids, redness and œdema; for this ice cloths may be applied. A membranous deposit in most cases will be formed upon the conjunctiva in about four hours; further use of the drug must then be stopped. In obstinate cases it is necessary to repeat the application once, twice, and occasionally even three or four times. When the inflammation produced by the application is over the cornea will be less vascular, the photophobia decreased and the condition such as to call for the use of astringents, which should finish the treatment.

Sulphate of copper is especially indicated at this period. The care of an attendant is necessary for the safe application of jequirity. (Ro.)

The more recent surgical measures for chronic cases are the following:

Expression:—Of the operative methods this is preferable. It consists of squeezing out the morbid tissues. The patient must be anæsthetized, the lids everted, and the loose rolls of the conjunctiva seized with the forceps, and stripped of the contents by a slow movement. This is continued until all trachomatous granules have disappeared. The conjunctiva is then washed with boric acid; the eyes are left open afterward. In a few days astringents may be applied. The conjunctiva is congested for some time, but this gradually disappears and recovery occurs

with little morbid tissue remaining and but little contraction. (Ro.)

Grattage:—After anæsthesia the lids are everted, the fornix exposed, and put on the stretch over the blade of the forceps. The conjunctiva is scarified by making incisions close together, parallel to the margins of the lids. These incisions are united by others running transversely, the depth of the incisions depending upon that of the trachomatous tissue; they generally pass through it. The surface is then scraped thoroughly with a tooth brush, having short stiff bristles, dipped in a solution of bichloride of mercury, 1-500. The eye is then washed and bandaged with an antiseptic dressing. The rubbing is repeated every day after the operation for two weeks, this frequently depending upon the amount of reaction. Œdema of the lids will follow, but it is claimed by those who endorse the procedure that the reaction is generally slight. The operation does not meet with general approval. (Ro.)

Galvano-Cautery:—This is another method used for touching the trachomatous granules, but it is inferior to the method of expression when properly executed. Its use is best adapted to discreet forms with little engorgement. (N. O.)

Proper hygienic surroundings are of much importance. Overcrowding, smoke, dust, and bad atmosphere of any kind should be avoided. High altitudes exercise a favorable influence on the disease, as it is likely to do in all forms of dyscrasia. Outdoor exercises or work are beneficial, provided it is not amid dirt, dust or smoke, or in stables or at farm work. (N. O.)

TOOTHACHE.

Dry Heat:—This much used, and often effective palliative, may be applied to the face in the form of the hot water bag or a bag filled with hot hop flowers. *A poultice should never be used.* The following remedies are to be applied by saturating a small piece of cotton, inserting it in the cavity of the carious tooth and coating with collodion:

Alum:—A solution in nitrous ether, ʒi-ʒvii , is said to be very effective.

Tannic Acid:—Druitt's formula for toothache, viz

Tannic Acid,	ʒi.
Mastich.,	grs. x.
Ether,	ʒss. (B.)

Chloroform and Camphor:—A mixture of these two agents forms one of the best applications. (N.)

Essential Oils:—Creosote, commonly used; Cloves, Cajuput, Chaulmoogra, Origanum, Peppermint, Sabina, and Thyme.

Cocaine Hydrochlorate:—May afford relief, but is apt to aggravate the condition upon which the pain depends.

Atropine:—1 per cent. solution.

Aconite:—A few drops of the tincture.

Chloral and Camphor:—Equal parts. (F.)

Capsicum:—A few drops of the tincture or fluid extract is sometimes used. (N.)

Odontine:—A name applied to various preparations for the teeth. English odontine is as follows:

Camphor,	5 parts.
Alcohol,	10 parts.
Chloroform,	20 parts.

Another formula:

Oil of Cajuput,	2 parts.
Oil of Cloves,	
Oil of Juniper,	each 3 parts.
Ether,	24 parts.

A bit of cotton is saturated with the above and inserted into cavity. (F.)

Odontol:—A new preparation; formula as follows:

Cocaine Hydrochlorate,	
Oil of Cherry Laurel,	each 15 grains.
Tr. Arnica,	150 grains.
Solution of Ammon. Acetat.,	300 grains.

If the pain is caused by caries, a piece of cotton saturated with this solution should be inserted; if by inflammation of the pulp, the mouth should be washed with Odontol diluted with twice its bulk of warm linseed tea; if the pain extends to the entire jaw, the part should be rubbed with the preparation. Caution should be observed lest any portion is swallowed. (F.)

Carbolic Acid and Collodion:—These agents are fused by melting crystals of the acid in a test tube and adding equal parts of collodion; the mixture is a jelly. When first inserted into the tooth there will be an aggravation of pain, followed by relief. (B.)

Piscedia:—The most reliable preparation is the fluid extract; it may be used with much benefit. (F.)

Phenoresorcin:—The powder placed in the cavity will afford relief. (B.)

Tr. Aconite and Tr. Iodine:—Equal parts, with or without a small quantity of Chloroform, painted on gums is effective; in some instances the iodine alone is used. (F.)

Carbonate of Soda:—A saturated solution held in mouth relieves. (B.)

Chloroform Water:—May be used as a mouth wash for toothache. (N.)

Chamomile:—The flowers steeped in hot water and

inserted into a small lace bag and applied to the gums over ulcerating tooth will sometimes afford relief.

Pyrethrum:—The tincture is employed by dentists to relieve toothache and as an ingredient of mouth washes.

TONGUE, FISSURE OF.

Nitrate of Silver:—The crayon; useful when the lesion is superficial. (Bt.)

Borax:—With honey or glycerine, a popular remedy, 40 grains, with glycerine 1 ounce, and water 4 ounces. (N.)

Hydrastis:—A valuable drug; about 5–10 drops to 2 ounces of water for a mouth wash. (R.)

Nitric Acid:—5 drops, water 3 ounces, or **Carbolic Acid**. same strength, are both recommended for mouth washes. (Rd.)

TONGUE, ULCERS OF.

For ordinary simple acute ulceration the treatment mentioned under Stomatitis and Aphthæ will suffice. For syphilitic ulcerations, as far as external remedies go, the same will answer, proper internal medication being all important.

Lactic Acid:—Applications of a 50 per cent. solution made every other day, gradually increasing strength, are of service in tubercular ulcerations.

Chronic ulcerations should be removed by surgical means. (F.)

TONSILS, HYPERTROPHY OF.

Enlarged tonsils, in which the hypertrophy is of long standing, and the tissues are dense and firm, will not yield to any form of treatment, and should be excised at once. There are many cases, however, in which the tissues are less dense and firm and the condition not so chronic, where remedies will produce results.

Astringents:—Are both extensively recommended and condemned as of doubtful efficacy; their action, it is claimed, being limited to the reduction of inflammation, with no influence upon the hypertrophied tissues.

The following are among the best:

Glycerole of Tannin.

Nitrate of Silver, grs. iiij—v—ʒi.

Sulphate of Zinc, grs. v—x—ʒi.

Sulphate of Copper, grs. iiij—ʒi.

Alum by Insufflation. (Bos.)

Infusion of Catachu. (F.)

Ammon. Iodide.—ʒss, with glycerine ʒi, painted on at night, has proved effective. (Wa.)

Iodine:—A few drops injected into the gland has been used, but the procedure is open to objection. (Bos.)

Trichloracetic Acid:—Has been found useful, employed in the following solution:

Trichloracetic Acid,	grs. v.
Sodium,	grs. ii.
Potass. Iodide,	grs. ijss.
Glycerine,	ʒi. (F.)

Tonsillotomy:—This is the one measure of relief

which should be advocated in all cases unless there are special reasons counter-indicating it. The gland may be best removed by the tonsillitome, galvano-cautery, écraseur, or cold wire snare. In a large majority of cases the tonsillitome is the best instrument. The galvano-écraseur possesses the advantage of extirpating without hæmorrhage; it is, however, slow and difficult to manipulate with children unless an anæsthetic is administered. In adults it may be used to advantage in order to avoid hæmorrhage, which should always be anticipated. (Bos.) In using this instrument the wire should not be allowed to go too deeply or to destroy tissue beyond the incision.

Cold Wire Snare.—When the tonsil is flat and deeply imbedded between the pillars of the fauces and it is impossible to reach it with a tonsillitome this can be used with advantage. (Bos.) The hæmorrhage after tonsillotomy is usually slight; it is advisable, however, to allow the patient to hold cold water in the mouth, in which a little **Gallic** or **Tannic Acid** has been dissolved. If hæmorrhage persists, saturated solutions of these remedies may be applied. If styptics are required, which is rarely the case, apply a saturated solution of **Chromic Acid**.

In all operations it is important to avoid wounding the pillars of the fauces, lest hæmorrhage occur, and loss of control of the muscles result. (Iv.)

Suprarenal Extract.—For the use of this agent in controlling hæmorrhage during operations on the nose and throat see **Adenoid Growths of the Pharynx**.

Galvano-Cautery.—Of the local destructive agents used for the removal of the tonsils, this may be

regarded as the most satisfactory. It is, however, a slow process. A slender pointed electrode should be selected and a number of punctures made with it in the face of the hypertrophied gland. This is better than superficial burning. Ivins recommends the galvano-cautery for hypertrophied tonsils with large open crypts. The point of the needle should be thrust into the opening of the crypt while the current is turned on and removed while hot in order to avoid unnecessary pain. Two or three lacunæ are thus treated at a time. Cocaine may be first applied. The reaction is slight and the treatment may be repeated in five days. This method is usually the most satisfactory for treating lacunar tonsillitis. If there are bands of tissue which prevent the free exit of caseous masses they should be divided or torn with a probe and the cavities emptied. (Iv.)

Mineral Caustics:—These are slow, unsatisfactory and require great caution in application, else neighboring tissues are destroyed; their use is not generally commended. **Chromic Acid** is the best of these agents, and continues to be advocated by some authorities. The fused acid on the point of a probe may be used on enlarged glands with open and distended crypts. (Iv.)

TONSIL, HYPERTROPHY OF THE LINGUAL.

The general indications are correction of the irritant character of the buccal secretions and the removal of the growth (L. B)

Iodine:—The glycerole painted on. (Ba.)

Chromic Acid:—This agent is condemned by Lennox Browne as dangerous. Its use, however, is allowed by other writers (P. M.), especially with the mirror, and under full illumination, when pain and danger are minimized. The fused acid on a probe after cauterization is employed. (T. 97.)

Galvano-Cautery:—This is undoubtedly the best agent for the removal of redundant tissues; the porcelain point or caustic snare may be used. (L. B.)

Cold Wire Snare:—Suitable for the removal of large, prominent masses. (P. M.)

TONSILLITIS.

ACUTE FOLLICULAR TONSILLITIS:

Importance of local treatment is now recognized; mild antiseptic sprays and gargles should be employed. (T. 98.)

Hydrogen Peroxide:—1 part to 8 of water does efficient service. (F.)

Creosote:—As a gargle, 1–2 drops to the ounce of water. (T. 98.)

Salol:—5 per cent., alcoholic solution 1 drachm, to 2 ounces of lukewarm water.

Izal:—1–200, as spray is said to tend to shorten attack. (T. 96.)

Iron Sulphate (Monsel's Sol.):—Applied undiluted to the seat of inflammation will quickly constrict the inflamed tissues, and promote recovery. Apply twice daily. (F.)

Potass. Chlorate:—Solutions may be used as a gargle in the intervals of application of Monsel's so-

lution (F.) Solutions of $\text{zi-}\bar{\text{z}}\text{iv}$, generally, as a gargle. (P. M.)

Simple gargles of **Boric Acid**, **Borax**, **Phytolacca** and **Boroglyceride** (1-5).

ACUTE SUPPURATIVE TONSILLITIS (Quinsy):

Ice:—Constantly holding small bits of ice in the mouth during the onset of the disease is often useful for allaying heat and pain.

Sod. Bicarb.:—The patient should be provided with a saucer of bicarbonate of soda, and every half hour, by simply wetting the forefinger, he can smear the inflamed fauces with the remedy. This simple procedure is highly recommended for relieving the pain. (Bos.)

A saturated solution is also used as a gargle for relief of the accumulation of ropy mucus.

Hot Compresses:—Flannels wrung out in hot water and laid over region of tonsils is soothing to some patients.

Tr. Guaiacum:—1 drachm, to hot water 1 ounce, held in the mouth may be comforting in the early stages of the disease. (Iv.)

Nitrate of Silver:— $\text{zi-}\bar{\text{z}}\text{i}$, painted on once or twice a day may be said to be successful in 1 case in 4; two or three applications usually necessary. (Ing.)

Steam Inhalations:—In early stages, lasting five to ten minutes. A little eucalyptol may be added. (Iv.)

Hot Water Gargles:—Useful in second stage. (Ba.)

Incision:—As soon as presence of pus is ascertained, incision should be made, followed by hot gargles for facilitating escape of pus. In some cases it is desirable to pass a director into the opening to prevent too early closure. (Ba.)

After recovery when the glands remain large they may be painted with the following:

Iodi,	grs. vi.
Potass. Iodid.,	grs. x.
Ol. Menth. Pip.,	M. v.
Glycerini,	ad. ℥i. (P. M.)

TORTICOLLIS OR STIFF NECK.

(See Muscular Rheumatism.)

TRICHOPHYTOSIS.

TRICHOPHYTOSIS BARBÆ:

Treatment must be governed by the duration of the disease and the condition of the hair follicles, whether they are involved, or the affection is mainly superficial; also by the extent of inflammation.

It is a matter of the utmost importance that the disease be prevented from invading the follicles. This may be accomplished as follows: The beard on the affected part should be clipped close with a pair of curved scissors, not shaved, lest the disease be spread. Scales or crusts, if present, should be removed by washing with warm water and Potash Soap thoroughly applied, and the loose hairs pulled out, after which an alcoholic solution of Boric Acid, ℥i-℥i, or Corrosive Sublimate, 1-400-500, or Carbolic Acid, ℥i-℥iv, should be used on the hairy part of the face. After drying thoroughly a strong parasiticide should be applied. (B. H.)

While the remedies for trichophytosis capitis are

generally applicable to this form of the disease, the following are worthy of especial mention:

Chrysarobin:—An ointment of xxx-ʒss-ʒi is employed advantageously. The disadvantages attending this drug must not, however, be forgotten. (Mor.) Dr. W. T. Corlett recommends a solution, in traumaticin or collodion, grs. xx-xxx-ʒi, to be painted on when there are only two or three lesions. The coating should be removed daily, the hair clipped, and the varnish reapplied.

Iodine:—When there is much irritability and there are several lesions, the tincture may be painted on as often as the condition of the skin permits. (Ck.)

Hydrarg. Bichlorid.:—Very effective; may be used as follows:

Hydrarg. Bichlorid.,	grs. viij.
Alcohol.,	ʒi.
Hamamelidis Destill.,	ʒiij. (Sh.)

Sulphur:—The following combination is effective:

Sulphur. Præcipitati,	ʒi.
Acid. Carbolicæ,	ʒi.
Vaselini,	ʒi. (Hd.)

Apply twice daily.

Copper Oleate:—This remedy occupies a prominent place in the treatment of this affection, viz:

Cupri Oleat.,	ʒss.
Lanolini Cum Oleo,	ʒi. (Ck.)

Or,

Cupri Oleat.,	grs. v.
Ol. Chamomillæ,	gtts. v.
Ung. Oxidi Zinci,	ʒi. (Sh.)

Hyposulphite of Soda:—1 part to 8 of distilled water, mopped on the affected part three or four times daily, is useful. (Hd.)

When the hair follicles are involved, the pathogenic changes are deep-seated, and the condition is similar to kerion. The indications for treatment under these circumstances may be briefly summarized as follows:

1. Remove the crusts by soaking in oil, and afterwards washing with warm water and potash soap.

2. Epilation, and shaving, daily or on alternate days.

3. The application of penetrating parasitocides, such as the Oleate of Murcury (20 per cent.), 30 grains, Sulphur 30 grains, with lanoline $\mathfrak{z}\mathfrak{v}\mathfrak{j}$, oil of almonds $\mathfrak{z}\mathfrak{i}\mathfrak{i}$, thoroughly rubbed on the skin 3 times daily; or Oleate of Copper grs. $\mathfrak{x}$ -xxx- $\mathfrak{z}\mathfrak{i}$, or Ichthyol $\mathfrak{z}\mathfrak{s}\mathfrak{s}$ - $\mathfrak{z}\mathfrak{i}$.

When there is much inflammation, Scarification, and the application of saturated Boric Acid lint Compresses is recommended. As the growth of the parasite is favored by moist heat, poultices are contra-indicated. (B. H.)

TRICHOPHYTOSIS CAPITIS:

This is one of the most obstinate forms of ring-worm. The hair should be cut short and the scalp scrubbed with soap and water, using preferably tar soap; the diseased hairs should be pulled out with forceps, and a parasiticide applied. In boys, when the eruption is extensive, the scalp may occasionally be shaved. During the course of the treatment it will be necessary to thoroughly free the scalp from the accumulation of epithelial scales, broken hairs and medicaments; for this purpose use German Green Soap, Soft Soap, or Tincture of Soap; afterwards the parts should be dried with alcohol or ether.

As the fungus retains its vitality several years all the articles worn about the head and neck should be burned. Stringent prophylactic measures must be observed in regard to unaffected children who are exposed to the disease. The most scrupulous cleanliness must be enforced, and no healthy child be permitted to sleep with one who is affected or use the same brush, comb, towel, cap, or other article. Bad hygienic surroundings should also be corrected, such as damp or ill ventilated apartments. As a prophylactic measure it is advised to keep the hair cut short and apply an antiseptic wash, such as a **Saturated Solution of Borax or Carbolyzed Oil**.

Epilation:—In acute or recent cases, when the fungus has not penetrated very deeply, the ordinary parasitocides are often successful without the necessity of epilation. In the cases commonly encountered, however, the disease has existed for some time, and this measure is essential. (Pp.) Crocker recommends a 10 per cent. solution of **Cocaine** in cosmoline, or **Carbolic Acid** in glycerine, 1–20. Bazin paints the parts with **Oil of Cade**, with a view of lessening the pain, removing about a quarter of an inch daily. **Rigolene** has also been used, but local anæsthesia is not very successful.

Of the numerous drugs which have been extolled for use in this affection, the following are presented for consideration. It must be borne in mind, however, that thoroughness and persistence in application are most essential if a successful result is to be attained:

Oleate of Mercury:—Highly endorsed, especially in the diffuse form. A 5 per cent. ointment for children under 8 years, or a 10 per cent. for older chil-

dren. A small piece is rubbed vigorously into the affected part night and morning; if there is much tenderness it may be omitted for a day or two. In the early stages, when there are only a few circumscribed patches, a more powerful application will be required; in this case a 10 per cent. ointment may be employed. (A. W.) Stronger preparations are recommended, as 1 drachm of the 20 per cent. ointment to 1 ounce. This must be used with caution for fear of salivation. (B. H.)

Ammonio-Chloride of Mercury:—20 grains to 4 drachms of sulphur ointment, is strongly recommended by Sir William Jenner.

Chrysarobin:—Unna's method of treatment is as follows: 1. Cut the hair close over the whole scalp. 2. Apply a protective zone of zinc paste, extending for a short distance over the smooth surface. 3. Then apply over entire scalp the following ointment: Chrysarobin, 5-10, salicylic acid, 2 per cent., ichthyol, 5 per cent. 4. Cover this with some impermeable substance, such as gutta percha or rubber. A flannel bandage or close cap is then applied. 5. Remove cap or bandage once in twenty-four hours, loosen dressing on one side, turn it over, and apply the ointment, then seal as before. 6. On the fourth day the chrysarobin ointment is removed with pledgets of cotton, and an ichthyol ointment, 5 parts to 100, is applied daily for three days. On the expiration of the first week all dressings, including the zinc paste, are removed and the scalp cleaned with oil and soap. The whole process is repeated for another week, and so on until cure is complete. This method is highly commended, but caution is necessary lest too active inflammatory disturbances are produced; when such

is the case, suspend the chrysarobin and cleanse thoroughly with hot water and soap. (B. H.)

Carbolic Acid:—One of the most effective remedies; it is used in various strengths combined with glycerine, or the following, suggested by Alder Smith, which has given satisfactory results:

Acid. Carbolic. (Cryst.),	
Ung. Hydrarg. Nit.,	
Ung. Sulphur.,	āā ʒss.

The ingredients are mixed without heat. The ointment may be used for children over eleven years of age; under that age, increase the proportion of Sulphur to double the amount or even more. The patches should be rubbed twice a day and the entire scalp once. (Hy.)

The following combination is said to have succeeded when carbolic acid, bichloride of mercury and chrysarobin have been used for four months without controlling the disease:

Acid. Carbolic,	
Ol. Petrolei,	āā ʒii.
Tr. Iodi,	ʒiiss.
Ol. Ricini,	ʒiiss.
Ol. Rusci, (German),	q. s. ad. Oj.

Apply over entire scalp once daily for four successive days, wash off with green soap on fifth day. Then clip the hair close and wash again as before. (T. 98.)

Copper Oleate:—About ʒi–ʒi, is said to have been efficient even in the most obstinate forms. (N.)

Formalin (pure or diluted):—Gives very good results, though its pungent odor is a drawback. (T. 98.)

Boric Acid:—Useful in the following:

Acid. Borici,	ʒss.	
Ether,	ʒv.	
Alcohol.,	ʒxx.	(Ja.)

Thymol:—Sometimes it has proved of value, and may be combined as follows:

Thymoli,	3ss.	
Chloroformi,	3ij.	
Ol. Olivæ,	3vj.	(Pp.)

Iodine:—The tincture is one of the best remedies in severe cases, painted on the parts twice a day. (F.)

Coster's paste, consisting of Tr. Iodine 2 drachms, Oil of Cade 6 ounces, is useful in recent cases. Paint on with a brush. In a few days remove the black crusts which form, by washing with soap and water; then reapply the paste. (A. W.)

A solution of 1–1000 of iodine in iodide of potash has been successfully employed in ringworm of the nails, the wet dressings being covered by gutta percha. (T. 97.)

Salicylic Acid:—The following is effective: The head is shaved in the usual way for at least an inch beyond the margin of the patch, then salicylic acid in collodion, 10 grains to the ounce, is painted on, extending beyond the diseased skin. This is repeated for a week; at the end of this period the layer of collodion is removed by lifting it with the blade of the forceps inserted beneath the margin; the salicylic acid is then applied for a week, and the same process of removal adopted, and so on until the disease is eradicated. Among the advantages of this method is the prevention of the access of spores to other parts. A solution of 1 drachm to the ounce of distilled water is also used. (B. H.)

Nitrate of Silver:—Devergie is in favor of applying a strong solution, 3–3ix of distilled water. This is a popular remedy both for ringworm of the head and body.

Blistering:—In very chronic cases and in the disseminated variety this is sometimes necessary. For this purpose the following:

Cantharides Collodion (Squibb's) or **Hydrarg. Bichloride**, 4 grains, with acetic acid, 1 ounce, may be used for producing vesication. These, however, are too strong for children under six years of age and for delicate or strumous persons. The crusts which form in a few days should be removed and mild soothing dressings applied, such as liquor detergens ointment. **Croton Oil** is also advocated, but if used at all it must be with caution and on limited areas, as it may cause permanent baldness. 1 part to 10 of olive oil is usually strong enough, but the strength may be increased until a mild degree of pustulation is produced, when a poultice should be applied and the loose hairs removed. (B. H.)

Tar:—May be employed in the form of the officinal ointment or oil of cade, or combined with mercury and sulphur, as follows:

Ung. Picis Liquidæ,	
Ung. Hydrarg. Nitratis,	āā ℥ii.
Ung. Sulphuris,	℥iv. (Pp.)
Liq. Carbonis Detergen.,	℥i-ii.
Hydrarg. Ammoniat.,	grs. x.
Lanolini Comp. Cum Oleo,	℥i.

This forms an effective and an agreeable ointment suitable for very young children and persons with delicate skins. (B. H.)

Sulphur:—The officinal, or Wilkinson's ointment, or the following combination, are effective:

Sulphur. Præcip.,	℥i.
Hydrarg. Ammon.,	℥ss.
Thymol.,	grs. x.
Vaselini,	℥i.
Ung. Simp.	ad. ℥i. (A. W.)

Naphthol:—A 1 per cent. solution in alcohol is used, or the following, which is recommended by Kaposi:

Naphthol.,	℥ss.
Spts. Sap. Vir.,	℥i.
Alcohol,	℥xxxv.
Balsam Peru,	℥i.
Lotio. Sulphuris,	℥v.

Apply twice daily for two or three days; then scrub with green soap.

During the course of treatment a change of remedy will often prove beneficial. After the disease has been apparently cured it will be advisable to continue with some mild parasiticide application for a short time.

TRICHOPHYTOSIS CORPORIS:

In selecting a parasiticide, the age of the patient, as well as the severity and extent of the lesion, should be taken into consideration. It may be necessary to remove hairs if the patient is very hirsute. The scales must first be washed off with soap and warm water, then some slightly irritating and astringent, or some antiparasitic application, will in most cases readily effect a cure. (And.)

For infants: **Resorcin** (grs. xv–xx to alcohol or vaseline ℥i). (B. H.) For adults and older children an ointment of **Oleate of Copper** (grs. v–xx–℥i, increased if necessary). (Sm.) **Ammoniated Mercury** (grs. xv–xl–℥i). (Vn.) **Ichthyol** (grs. x–xxx–℥i). (B. H.) **Sulphate of Quinine** (5 per cent.). (F.) **Salicylic Acid** (10–20 per cent. ointment) used daily in conjunction with weekly applications of a **Bichloride** lotion. (Ja.)

Hydrarg. Bichlorid. grs. ii-iv to the ounce of alcohol or water, or a solution of 10 grains to the drachm, retained *in situ* for a few minutes only. (And.) Compound tincture of **Benzoini**. (Ja.) The latter may be painted on once a week.

Carbolic Acid:— $\bar{z}i$ - $\bar{z}i$ of glycerine. (B.)

Chrysarobin:—Grs. x-xxx- $\bar{z}i$, suspended in flexible collodion or traumaticin, is excellent, but should not be used in cases of infants or about the face. (B. H.)

The following is efficient in obstinate forms located on the thighs and groins:

Creosoti,	M. xx.
Ol. Cadini,	
Sulphuris,	$\bar{a}\bar{a}$ $\bar{z}$ iii.
Potass. Bicarbonatis,	
Adipis,	$\bar{a}\bar{a}$ $\bar{z}$ i. (Vn.)

Should remedies of this class fail, blistering fluids may be applied: Smith's **Emplastrum Cantharidis Liquidi** is good; also **Acetum Cantharadis**, prepared with glacial acetic acid. It should be painted on the eruption with a small brush. One application is usually sufficient; but if not, repeat in a few days. There are numerous other remedies, such as **Sulphurous Acid**, **Acetic Acid**, **Sodium Sulphide**, etc., all of which will be found of service. To prevent relapse, or the spread of contagion, the clothing should be boiled, baked, or in some way disinfected.

TUBERCULOSIS.

TUBERCULOSIS OF THE LARYNX:

The important indications of treatment are relief of the dysphagia, the dyspnœa, and the ulceration.

Deep ulcers are most effectively and speedily treated by surgical means; in rare cases cured; in any case relieved.

Local treatment should be preceded by cleansing sprays, such as **Boric Acid**, **Borax** or **Salt**, grs. x to the ounce. (Gn.) Thorough cleansing is also essential in order to limit the irritating action of the sputum.

Lactic Acid:—Now accepted by most observers as one of the best topical remedies. Even in the most unfavorable cases it will relieve dysphagia. The strength of the application may vary from 10 per cent. to the pure acid. It is advisable to begin with a weak solution, as the healthy mucous membrane, if involved in the application, may become highly irritated. When hardened infiltrations are present, curettage or scarification should precede the application. The acid acts quickly on soft ulcerations and with especial rapidity on ulcerated surfaces. Applications should be made daily with a brush; then every other day. Laryngeal spasm and a sense of burning may follow, but these conditions may be relieved by cocaine in 10–15 per cent. solutions. (Al.)

Curettement:—This measure is analogous to excision for the removal of the focus of infection; followed by lactic acid applications, it has proved highly beneficial.

Indications—1. Primary disease without pulmonary infection.

2. Cases with concomitant lung disease incipient or arrested before softening or hectic.

3. Circumscribed ulcerations and infiltrations.

4. Dense, hard swelling of arytenoid region, tuberculous tumors, affections of epiglottis.

5. Advanced lung disease with distressing dyspnoea.

Absolute rest after the operation must be enjoined, with daily application of lactic acid and pyoktanin 1-2 per cent. Cicatrization is usual in from one to four weeks. (L. B.)

Ichthyol:—Applied pure after curettement has succeeded when the operation followed by lactic acid has failed. (Sj.)

Guaiacol:—Affords great relief, applied pure after lactic acid applications following curettement. Also in form of a 20 per cent. spray. (T. 97.)

Chromic Acid:—A 3 per cent. solution acts well in superficial ulcerations. (T. 96.)

Lacto-Carbolized Glycerine:—The following is claimed to form a superior application:

Lactic Acid,	3 ss.
Neutral Glycerine,	3 v.
Carbolic Acid,	M. xv.

As tolerance increases, the strength of the two acids is also increased two to four times. (Sj.)

Monochlorphenol:—5 per cent. solution in light petroleum oils or glycerine, is palliative in action.

Parachlorphenol:—Mixed with glycerine in various proportions forms a soothing application. Report of 10 cures out of 26 cases. (Sj.)

Airol:—By insufflation, superior to iodoform or aristol. (T. 98.)

Balsam Peru:—As an inhalant, 10 parts to 5 of alcohol, 20-30 drops in a pint of boiling water. (Al.)

Resorcin:—Daily application of an 80 per cent. solution for ulcerative stage. (Al.)

Sedative Inhalants:—Of the following solutions, 1 drachm to a pint of boiling water may be employed:

Ext. Opii, grs. v- $\bar{z}$ i.

T. Opii Camphoratæ, $\bar{z}$ i- $\bar{z}$ i.

Ext. Belladonnæ, grs. iv- $\bar{z}$ i.

Ext. Stramonii, grs. v- $\bar{z}$ i.

Iodoform:—For constitutional effects this remedy may be administered by inunction as mentioned under pulmonary tuberculosis. As a local remedy it exerts a retarding influence upon the disease and is indicated at any stage, but appears to yield the best results in superficial ulcerations of the arytenoid masses. It is usually employed pure by insufflation. A small proportion of morphine may be added advantageously. For an astringent sedative effect the following:

Iodoformi,	grs. vi.
Bismuth. Subnit.,	
Benzoin. Res.,	āā grs. xxx. (Ing.)

Pyoktanin:—Probes heated, dipped in the powder and rubbed on the ulcers promote cicatrization. (Al.)

Creosote:—Inhalations or sprays of this remedy are generally contra-indicated when there is a tendency to hæmorrhage and by high temperatures; if used under these conditions caution must be observed.

The following are convenient formulæ:

For inhalation:

Creosoti,	M. lxxx.
Magn. Carb.,	grs. xxv-xl.
Aquæ,	$\bar{z}$ i.
A teaspoonful to a pint of water.	(Lefferts.)

Or,

Creosoti,
Chloriformi,
Alcoholi, partes equale.
A few drops on a sponge.

For a spray :

Creosoti,	M. ij.
Mentholi,	grs. iv.
Albolenei,	℥j.

Use with an atomizer several times a day. (F.)

Terebene:—5–40 minims, to water 1 ounce, with about 20 grains of mag. carb.; a teaspoonful of the mixture to a pint of water. Inhale the vapor at a temperature of 140° for ten minutes night and morning. (F.)

Cocaine:—For the relief of pain and dysphagia. A simple 4 per cent. solution as a spray (Os.), or the following :

Hydrochlorate of Cocaine,	grs. iv.
Hydrochlorate of Morphine,	grs. ij.
Antipyrin,	℥ss.
Cherry Laurel Water (made by distillation),	
Sterilized Water,	āā ℥ij.

From 2–4 teaspoonfuls by atomization every twenty-four hours.

Hydrochlorate of Cocaine,	grs. iij.
Sugar of Milk,	
Gum Arabic, Powdered,	āā ℥i.

Apply by insufflation. (T. 97.)

Formaldehyde:—Solution of 1–10 per cent. highly endorsed. Cocainization is necessary after using on account of the interior smarting; a 20 per cent. cocaine solution may be necessary after the stronger solution. (T. 98.)

Sodium Formate:—Has proved of great service; may be used in solutions of 5–20 grains to half an ounce each of glycerine and water, or an ounce of water alone. As an insufflating powder it is combined with starch, 1 part to 4 of starch. This is

blown on the ulcerated spots only. As a pigment it is employed in advanced cases in the strength of 40–60 grains to the ounce. (F.)

Ligno-Sulphite:—By inhalation, 10–30 per cent. solution, relieves cough and dysphagia and improves the ulcers. (T. 98.)

Hydrarg. Bichlorid.:—Recommended as a spray as follows:

Hydrarg. Bichlorid.,	grs. iv.
Ammon. Chlorid.,	grs. x.
Glycerini,	℥ij.
Aquæ,	℥viij. (Al.)

For submucous injection when there is local tumefaction without ulceration:

Pyoktanin, 2 per cent. solution.

Aristol, 2 per cent. solution.

Phenazonum, 50 per cent. solution. (T. 96.)

For intra-tracheal injection:

Camphor,	
Menthol,	āā grs. v.
Albolene,	℥i. (T. 98.)

TUBERCULOSIS OF THE LUNGS:

Iodoform Inunction:—This method has recently been introduced in the Metropolitan Hospital, Blackwell's Island, by Dr. W. B. Keiser, of the house staff, with the approval of the author. The following ointment is carefully prepared:

Iodoform.,	℥ss.
Ol. Anisi,	M. x.
Ol. Gaultheræ,	℥ii.
Ol. Olivæ,	
Lanolini,	āā ℥v.

This is administered after the same plan as mercurial inunctions;

that is, rubbing the flexor surface of one arm one day, that of another the next, then the chest, abdomen, back, etc. After the different surfaces have had the inunction applied, the process is repeated and kept up until there is some indication of change. The author has observed some good effects from this method and no bad results.

Inhalations:

Creosote:—Lessens expectoration and deodorizes, but contra-indicated when there is tendency to hæmorrhage, viz:

Creosote,
Ethyl Iodide,
Turpentine, equal parts.
10-20 drops in inhaler.

Creosote,
Eucalyptol,
Turpentine, equal parts.
10-20 drops in inhaler.

Creosote,
Thymol,
Alcohol, equal parts.
10-20 drops in inhaler. (Sm.)

Thymol:—The following formula suggested by Dr. C. C. Rice is useful:

Menthol,	
Thymol,	
Carbolic Acid,	āā grs. v.
Oil of Eucalyptus,	ʒii.
Oil of Pinus Silvestris,	ʒiii.

Teaspoonful to a pint of boiling water, or a few drops inhaled from cotton.

Eucalyptus:—The oil poured on boiling water, or eucalyptus water in a steam atomizer, when expectoration is fetid. (Sm.)

Terebene:—Less active than other agents as a

germicide, but more stimulating; useful in combination with other remedies.

Tr. Benzoin Comp.:—1 drachm, to a pint of boiling water.

Tar Water:—Heated, and the fumes inhaled. (F.)

Iodoform:—4 per cent. solution in turpentine, or 1 drachm to turpentine 1 ounce; 3 to 4 drops at high temperature. (Sm.)

Iodine:—Sometimes used, viz:

Sol. Iodine (Iodine, Potass. iodide, each	
grs. iij, Alcohol, ℥i),	℥i-iv.
Water,	℥v.

Place in a suitable inhaler and expose to heat.

Tr. Conium may be added to lessen its irritating qualities. (F.)

Ethyl Iodide:—This will give the effect of iodine combined with a sedative action. It may be inhaled directly from a vial or dripped upon the sponge of Yeo's perforated zinc respirator. The frequency of its administration will depend upon the severity of the case, and its duration upon the immediate effects shown. Vertigo will be produced if inhaled too long. The average time is five minutes, the average frequency six times a day. (F.)

The following is a formula for inhalation:

Turpentine,	gtts. v.
Glycerine,	℥i.
Water,	℥i. (F.)

Peppermint:—Method of use as follows: Fasten on the nostrils a piece of linen folded once, on this a few drops of essence of peppermint are poured. The nostrils should previously be greased to avoid irritation, then the patient should take eight or ten deep inspirations with closed mouth, repeating the procedure every fifteen minutes for a time. (Sj.)

Guaiacol:—The following is to be used for impregnating the atmosphere of the room:

Guaiacol,	℥ iss.
Eucalyptol,	℥ i ℥ ii.
Carbolic Acid,	℥ i.
Menthol,	℥ v.
Thymol,	℥ iiss.
Ess. Cloves,	℥ i ℥ xv.
Alcohol (at 90°)	q. s. ad. Oij.

Of this, 1 ounce is placed in the bottle of the large atomizer of Lucas Championniere, the bottle of which is two-thirds full of water. This is sprayed in the patient's room for two hours daily, and is claimed to form an important adjunct of treatment. (Sj.)

Sprays:

Serve to cleanse and deodorize the pharynx and upper respiratory tract, and assist in relieving dysphagia and other distressing throat symptoms. The following may be used:

Guaiacol:—Especially efficacious as a deodorant in all forms of tubercular catarrh. 1 part to 600 of water. (F.)

Hydrogen Peroxide:—1 part to 8; stronger if desired, repeating applications until froth has been washed away.

Boric Acid:—Grs. x-xx-℥ i.

Chlorine Water:—℥ i-℥ i.

Potass Permang.—Grs. i-viii-℥ i.

Sulphurous Acid:—M. x-℥ i-℥ i.

Lactic Acid:—M. vi-℥ i-℥ i.

Oil of Turpentine:—Gtt. i-v, Glycerine ℥ i, Water ℥ i.

Salicylic Acid:—Grs. v-℥ i. (F.)

Creosote, ℥ i—Tr. Benzoin Comp. ℥ ii, Distilled Hamamelidis, Water, Glycerine āā ℥ iiss; inadvisable when there is a tendency to hæmorrhage. (Sm.)

Cocaine:—In solutions as mentioned for tuberculo-

sis of the larynx for the relief of the dysphagia. (An.)

For *intracheal injections*:

Guaiacol,	2 per cent.
Menthol,	10 per cent.
Olive Oil,	88 per cent.

1–2 drachms are rapidly injected during inspiration. Coughing may be avoided by quickly passing the nozzle of the syringe through the rima glottidis and injecting into the trachea. It is claimed there is no discomfort, and that the relief of the dyspnœa is marked. (Sj.)

Guaiacol may also be administered by rectal injection. Milk forms an excellent expectuent for this purpose; dissolve 1 part in from 20–30 of milk. The solution keeps indefinitely, and readily mixes with water.

For the chest pains which accompany advancing tuberculosis, the various mildly counter-irritant and soothing liniments and embrocations will assist as palliatives. For the dyspnœa the following rubbed on the chest may be employed:

Croton Oil,	1 part.
Oil Cajuput,	
Alcohol,	each 3½ parts. (Al.)

Sometimes an anodyne gargle will be found to afford relief to the cough and throat. For this purpose the following are suggested:

Tr. Opii Camphorat.,	
Tr. Benzoin., Comp.,	
Tr. Kino,	āā 3i.

Dilute with water and gargle.

Or,

Tr. Opii Camphorat.,	
Aq. Menthol. Pip.,	
Glycerini,	āā 3i.

Dilute with water and gargle.

(Sm.)

Antiphthisin:—This is an sozalbumin isolated by Klebs from cultures of the tubercular bacilli. Klebs maintained that the remedy was entirely destitute of the toxic properties of tuberculin, the alkaloids and toxalbumins of which were eliminated. In from 80–90 per cent. of a series of cases of pulmonary tuberculosis, the administration of the remedy was attended with improvement and in the early stages the disease was arrested and apparently cured. (F.) Antiphthisin is usually given hypodermically; the dose for adults should commence with one-tenth of a c. c., to be increased daily by the same amount until five-tenths have been reached. This may be repeated for several days or a week, and again increased by tenths as heretofore. When 1 c. c. has been reached, repeat this dose for a week or more, and when distinct improvement is manifest, as is usually the case, this dose may be continued for a longer period. It is rarely necessary to exceed two c. c., although much larger doses are well tolerated without producing disagreeable symptoms. The remedy may be continued in doses of 1 to 2 c. c., according to the results obtained and the character and stage of the disease, for several months, when it may be intermitted, especially if the results are such as to point to the entire arrest of the malady. But even in these cases and in those where all symptoms have disappeared, it is well to repeat the series of injections after an interval of one or more months, during which time the patient should be kept under observation. (T. 97.) As much as 10 c. c. given daily for several weeks has been used and it has also been administered by rectal injection. It is recommended only in the earlier stages of the tubercular

process. When larger amounts than 1 c. c. are given, the dose should be divided—one-half being administered in the morning and the other at night. If local irritation is produced, the medicant may be diluted with a small quantity of distilled water and injected into the rectum. In this country antiphthisin may be obtained from Dr. Von Ruck, and in Europe from the laboratory of Klebs, in Strasburg. (F.)

Maragliano's Serum:—This was obtained from the dog, the ass and the horse, and was presumed by its discoverer, Maragliano of Genoa, to contain a tubercular antitoxin. He recommends that 1 c. c. should be injected systematically every two days. He first began with double the dose, but found that the smaller amount was sufficient. In continuous fevers, with persistent high temperature, as much as 5 and even 10 c. c. may be injected in one dose, repeating in from five to eight days, and so on, when after two or three days an impression will be found to have been produced in the patient's temperature. Maragliano sums up the following results from his statistics: "1. The remedy has been proved to be quite innocuous. 2. It has caused subsidence of fever. 3. It has had a modifying influence on the morbid local processes. 4. It has caused the bacilli in the sputum to diminish in number or entirely disappear. 5. It has brought about a notable increase of weight. 6. It has had a beneficial effect, more or less marked, according to the gravity of the disease, in 91.79 per cent. of the cases. 7. It has cured or put on the road to cure nearly all the patients with circumscribed, non-febrile forms of the disease. 8. It has even cured cases in which cavities had formed. 9. It may be used to advantage in all forms of tuberculosis."

Tuberculin:—A careful study of the results obtained by the use of this remedy in tuberculosis has led to the general conviction that its benefit is not only doubtful, but that, unless it is employed with discretion and care, harm may follow its administration.

According to Drs. Grasset and Vedel this remedy has fallen undeservedly into disrepute, owing, it is claimed, to the fact that probably too large doses have been employed, the most serviceable dose being from two-tenths to three-tenths of a milligramme for the first and half a milligramme for the second injection. From experiments on fourteen cases, these writers arrive at the following conclusions: 1. In doses as above stated the remedy is quite harmless and there is no risk of aggravating an existing tuberculosis. 2. In certain cases the action was sufficient to make a diagnosis of tuberculosis. 3. In two cases the reaction was doubtful or absent. 4. Absence of reaction was found not to exclude the presence of tuberculosis, since there was none in three cases. This is explained on the supposition that the organism had become accustomed to the toxin, when these small doses would be ineffectual. 5. One case showed a slight reaction. (T. 97.)

It is advised that injections of tuberculin should not be repeated until twenty-four hours after all signs of irritation from the previous dose have disappeared. Another plan of doses than those above stated has been advised, viz: One-tenth of a milligramme increased by one-tenth at each succeeding administration until one milligramme is reached, when the dose may be increased more rapidly, according to the tolerance of the patient.

Physical Exercise:—Treatment and prophylaxis by lung gymnastics form a valuable adjunct when vital capacity is low and chest expansion limited. Forcible expansion of the apex will be found useful in incipient cases. (Sj.)

Respiratory Differentiation Therapy with the Pneumatic Cabinet:—The more general adoption of this method for the treatment of diseases of the lungs is urged by Solis Cohen. Inspiration of condensed air and expiration into rarefied air alone or in combination are the expedients generally employed.

Inspiration of Condensed Air:—Indicated in chronic pulmonary tuberculosis at any stage of general softening with cavities, but particularly in the early stages when deficient respiration, anæmia, poor circulation and digestive disorders suggest tuberculosis, even in the absence of pronounced physical signs and of bacilli in the sputum. In such cases it may be employed, in place of change of climate, for those patients compelled to consider expense. The good results from this procedure are most strongly urged. When there is any weakness of the pulmonary vessels, or when it is inadvisable to increase the blood pressure in the brain, or kidneys, or other abdominal viscera, the method is contra-indicated.

Expiration into Condensed Air:—Should be combined with inspiration of condensed air for the relief of congestion and stimulation of absorption as in consolidation persisting after pneumonia, and in chronic pleurisy with effusion. This is highly recommended for tuberculosis, but is inferior to inspiration of condensed air with expiration into rarefied air. This method is also recommended in cases

where the expiration is imperfectly performed, as a means of strengthening the respiratory muscles. It has been found of service in convalescence from pulmonary tuberculosis and as a prophylactic against the same.

Expiration into Rarefied Air:—Combined with inspirations of condensed air, may be employed when it is desired to increase the activity of the circulation of the amount of air in the lungs, or to get rid of accumulations in the alveoli, bronchi or quiescent cavities.

Inspiration of Rarefied Air:—Is employed to strengthen the muscles of inspiration by increased exercise. It is indicated in cases of contracted thorax, as a preventative against pulmonary disease. (F.)

In spite of the high commendations, the use of the pneumatic cabinet has rather declined than increased. This may be owing to the impossibility of its practical application, for, in order to be efficient, the apparatus should be used two or three times a day, with intervals of rest; therefore, unless the patient has one at home or is in a hospital provided with one, the treatment is of no avail.

Fresh Air Cure:—The plan of this treatment is to place the patient in as perfect a condition as possible as far as air and hygiene are concerned. It has been pursued at the Hospital of Ormesson, situated in the remote part of the plateau of Champigny, at an elevation above the sea of about 308 feet and overlooking the valley of the river Marne. The buildings serving as dormitories consist of two immense wooden pavilions, the capacity of which is not less than 101,710 cubic feet of air, constantly renewed by perforated

windows. No special medication is employed excepting cod liver oil in very cold weather. Unless there are contra-indications each patient is bathed twice a week, thoroughly soaked, then vigorously rubbed in order to obtain a complete reaction of the skin. Very good results are claimed. (T. 97.)

Climate:—The importance of open air life and sunlight cannot be too greatly emphasized. When patients can spend all day out of doors, and when indoors live in a pure atmosphere, they will do well. There is no climate where patients can be sent indiscriminately; a suitable locality must be selected for each case. Generally speaking, a dry, equable temperature should be chosen; yet dryness is not by any means always a requisite, as evidenced by the beneficial effects of Torquay and Falmouth, in England, places noted for humidity. Low altitudes are sedative and soothing, high are stimulating and invigorating. The extreme cold of an Adirondack winter and the mild temperature of Florida and the West Indies must both be considered. Sea voyages may prove beneficial to those who are fond of the sea and are naturally good sailors.

In regard to altitude the following are the conclusions of Dr. F. I. Knight: *

High altitude is most likely to prove of benefit when the age is under fifty, temperament phlegmatic rather than nervous, with weak heart, feeble pulse, and inability to resist cold. Those showing irritability from disease are not to be included in the latter, as they are generally benefited.

As regards disease those with:

* Transactions of the American and Climatological Assn., 1888.

1. Early apical affections, with little constitutional disturbance, are most benefited.

2. Cases of more advanced disease, with evidences of consolidation, without excavation or any serious disturbance do well. When the apices are both much involved, the pulse generally over 100, and the temperature above 100° , it is better to begin with a low altitude.

3. Hæmorrhagic cases, early cases with hæmoptysis and without fever, or much evidence of disease, are benefited.

4. Patients with advanced disease; those with cavities or severe hectic symptoms, should not go to high altitudes. A small quiescent cavity is not a contra-indication; hectic symptoms on the other hand are.

5. Patients in an acute condition should not be sent.

6. Patients with fibroid phthisis are not suitable subjects.

7. Convalescents from pneumonia and pleurisy usually do well.

8. Advanced cases of laryngeal tuberculosis may not do worse than elsewhere, if good local treatment and freedom from dust can be obtained.

9. When other diseases complicate, much care is necessary. Cardiac dilatation and hypertrophy, nervous palpitations, and diabetes are contra-indications. A cardiac murmur, the result of an old endocarditis, with no sign of enlargement or deranged circulation, should not deter, neither is syphilis a contra-indication.

The following classification of localities, according to Dr. G. A. Evans, will be found useful:

1. Cool and moderately mild; general elevation 2,000 feet; western slope of the Appalachian chain, Adirondacks, Catskill, Allegheny, and Cumberland Mountains.

2. Moderately warm and moderately moist; western North Carolina (Asheville), elevation 2250; western South Carolina, Aiken, Georgia, Marietta, and Thomasville.

3. Warm and moist. Florida (equable), southern California, coast region (equable).

4. Warm and moderately dry. Elevation 2,000 feet. Southern Texas, southern California, inland.

5. Cool and moderately dry; elevation 1000 feet; Minnesota, Nebraska, Dakota.

6. Cool and dry; elevation from 4000 to 7000 feet. Montana, Wyoming, Colorado, northern New Mexico, western Kansas.

7. Warm and dry; elevation 3000 to 5000 feet. southern New Mexico, southern Arizona. (Ev.)

Sanitaria:—These institutions have demonstrated their utility beyond all question. Although they have as yet only been established at moderate elevations, their statistics show twice as many cures as the open air treatment in the same altitude. The rigid hygienic rules and the constant intelligent supervision of the daily life of the patient have doubtless much to do with bringing about these results. The comparative nearness and cheapness of these institutions place them within the reach of persons of moderate means, to whom the expenses of a long journey and hotel bills are matters of consideration.

TYPHOID FEVER.

The use of cold baths is now recognized as having not only reduced the mortality, but also the frequency of complications, excepting hæmorrhage. Some practitioners employ them regularly at 6 a. m., 1 to 3 p. m., and 7 p. m., but the majority prefer to administer them with more or less frequency according to the range of temperature.

Brand Treatment:—A bath is prepared at a temperature of 65° – 100° , filling the tub two-thirds full; the patient, if sweating, should be dried, and the bladder emptied. To avoid annoyance it is better to screen the bath during preparation. When all is ready the patient is covered with a sheet and gently placed in the tub. While in the bath vigorous rubbing is applied, except on the abdomen; this is essential to prevent cyanosis and collapse. An ice compress should be applied on the head or effusion of ice water poured on it. This measure is regarded as important in cases with severe nervous symptoms, and should be continued for fifteen minutes. The bed should have been previously provided with a rubber sheet and blanket, the patient should now be rubbed dry and wrapped in a blanket, hot water bags applied to the extremities and the rubber sheet and under blanket withdrawn. (Gn.)

As soon as the patient ceases to shiver after the bath the temperature should be taken. After an interval of three hours it may be again taken; if it is then 102° or above, the bath is repeated. If 102° or below, but above 101° , it is taken again in an hour;

if below 101° and above 100° in ten hours. When the temperature reaches 102.2° a bath may be given, provided three hours have elapsed since the last. (Ty.)

Von Ziemssen's modification of the Brand bath is what is known as the graduated bath. The water is prepared at a temperature of 85° – 90° and gradually lowered to 40° . The duration of the bath is half an hour. Rubbing is also necessary. While adding the cold water care must be taken not to allow it to come in contact with the skin. (Gn.)

Cold Sponging:—For the reduction of temperature this may sometimes be preferred to the cold bath, as the liability to shock is lessened, and the exhausting effects of the patient's removal from bed obviated. Commence with water at a temperature of 90° and gradually lower to 70° or less according to the bodily temperature, which must be carefully watched. An important feature is the exposure of the surface to the atmosphere during the sponging, as the evaporation rather than the temperature of the water cools the body. It is advisable to allow a film of water to remain on the surface. The sponging should continue for about twenty minutes. Alcohol is sometimes used instead of water, especially in hot weather, when it is preferable. Sponging with ice water is also recognized. (Gn.)

Ice Cradle:—This consists of an ordinary iron cradle sufficiently long to entirely cover the patient, who lies underneath covered with some light muslin. Attached to the cross-bars are small zinc baskets filled with ice. The baskets are covered with lint to prevent any condensation of moisture falling on the patient. The cradle is covered with a counterpane

except at the two ends, which are left open to allow a constant interchange of air. Hot bottles are placed at the patient's feet. Before the cradle is used the patient should be sponged with tepid water. Fenwick, who has offered this method as a substitute for the bath, claims it is as effective in reducing the temperature. (Gn.) The advantages are the avoidance of shock of the cold bath and the removal of the patient from bed.

Cold Air Treatment:—Subjecting the patient to cold air from a freezing machine has been suggested for hospital use by J. Murray Gibbes, in the Aust. Med. Gaz., Ap. 24, 1897. (T. 98.) It would seem that the ice cradle of Fenwick would accomplish the same end in a much more simple way.

Wet Pack:—Not as effective as the baths, still is very useful in reducing temperature. It has the merit of convenience, and may be used several times a day, the patient remaining in it from five minutes to an hour, according to the temperature. (B.)

Enemata:—Will sometimes be necessary for constipation.

For thrombosis of the femoral vein elevation of the part and the following ointment:

Ung. Ichthyoli,	
Lanolini,	āā ℥ii.
Ung. Belladonnæ,	q. s. ad. ℥i. (An.)

Rectal Tube:—When tympanitis is very distressing this may be cautiously used; sometimes large quantities of gas are thus discharged.

Ice to the Abdomen:—Should be employed as an adjuvant in cases of hæmorrhage.

Morphine:—Should be given hypodermically when there is sharp sudden pain in the bowels in order to secure absolute rest, and for checking hæmorrhage.

(An.) It may also be administered in some cases for insomnia. (Ty.)

Ergotin:—Hypodermically, repeated every hour for severe hæmorrhage.

Turpentine Stupes:—For meteorism. (An.)

Disinfection:—The following are the conclusions of W. Gilman Thompson, M. D., read at the N. Y. State Med. Soc., on Jan. 28, 1897:

1. The best disinfectants for typhoid urine and stools are: (I.) A 1–500 acidulated solution of corrosive sublimate; (II.) a 1–10 crude carbolic acid solution; (III.) chlorinated lime.

2. Owing to the possibility of injury to plumbing, the carbolic acid solution is preferable wherever plumbing is concerned. The lime is best for country use in privies and trenches.

3. The disinfectant should be thoroughly mixed with the stool, and left in contact with it for fully two hours. Enough of the disinfectant must be added to completely cover the stool with the solution.

4. The bed-pan should be kept ready filled at all times with at least a pint of the disinfectant, into which the stool is at once discharged, and should be filled with scalding water and one of the disinfecting solutions.

5. Rectal thermometers, syringes, tubes, and all utensils coming in contact with the fæcal matter must be disinfected with the corrosive sublimate or carbolic acid solution.

6. After each stool the patient's perinæum and adjacent parts should be washed and sponged with a 1–2000 corrosive sublimate solution.

7. Nurses and attendants should be cautioned to

wash their own hands thoroughly, and immerse them in a 1-1000 corrosive sublimate solution after handling the bed-pan, thermometer, syringe or patient, or giving sponge or tub baths.

8. All linen or bed clothing used by the patient should be soaked in a 1-20 carbolic acid solution, and subsequently boiled for fully two hours.

9. Disinfection of the stools should be begun as soon as the diagnosis of enteric fever is established, and should be continued for ten days after the temperature has remained normal.

10. In localities where a proper drainage system is lacking, the stools should either be mixed with sawdust and cremated, or buried in a trench four feet deep after being covered with chloride of lime.

ULCERS.

Cleanliness, Antisepsis, Avoidance of Irritation, and complete physiological Rest are the essentials of treatment. First cleanse with warm water and some good soap, Castile or medicated, scrub with brush the surrounding skin and bathe thoroughly with an antiseptic lotion, the strength of which will depend upon the nature of the lesion; generally it should be mild to avoid irritation, using such lotions as saturated solutions of boric acid, or sublimate 1-6000, though some writers advocate much stronger applications. After this the selected dressing may be applied. When the ulcer is situated on the lower extremity, rest by means of elevation of the limb or placing the patient in bed. Not a few ulcers which have resisted all other efforts for inducing resolution

will at once begin to heal when the recumbent posture is maintained. The element of rest in bed applies to the treatment of ulcers of all varieties when situated on the lower extremity.

There are a vast number of remedial agents which have been recommended for this lesion, many of which, in view of modern antisepsis and asepsis, are now obsolete.

The different varieties of ulcers with some of the well-attested methods of treatment are as follows:

HEALTHY ULCERS:

Avoid irritation and permit the surface to cicatrize. If large, apply the following:

Hydrarg. Chlor. Mitis,

Ung. Zinc. Ox. Carbolat., āā ʒi.

Over this place "protective" or gutta percha.

Simple antiseptic dressings are, as a rule, better than ointments.

For stimulation when healing is slow, Nitrate of Silver or Chlorat. Hydrat., grs. x-ʒi. (A.)

IRRITABLE ULCERS:

Dusting Powders:—Those of a soothing, drying character, Airol, Acetanilid, Iodoform, Iodol, etc.

Cocaine:—With belladonna ointment, 5 grains to the ounce; or, Fld. Ext. Grindelia diluted with water or glycerine. (Sm.) The Curette may be used for removal of sensitive granulations. (A.)

INFLAMED ULCERS:

When there is extensive inflammation, continuous warm antiseptic baths will convert the sore into a simple one. (Den.)

Calendula:—Very useful; a solution of 1 part to 5-6 of a 1½ per cent. solution of carbolic acid. Soothing in action. Used also for ulcers of other varieties. (M. H.)

FUNGOID ULCERS:

Employ agents which will constrict vessels and apply pressure with cotton bandage. The following solutions are useful:

Copper Sulphate, grs. i-x-ʒi.

Zinc Sulphate, grs. i-x-ʒi.

Silver Nitrate, grs. i-x-ʒi.

Nitrate of Silver Stick. (Den.)

ŒDEMATOUS ULCERS:

This condition is likely to occur after the prolonged use of wet dressing or poultices. The margin of the ulcer may appear fairly healthy, but the granulations elsewhere will have become swollen, pale, semi-transparent and friable, exuding watery pus. Treatment must be stimulating, including applications of the following nature:

Resin Ointment, Balsam Peru, Astringents and Mechanical Support. (Den.)

INDOLENT, CALLOUS OR CHRONIC ULCERS:

For cleansing and disinfecting, wash ulcer with soap and water. Saturate surrounding skin with turpentine and scrub with 4 per cent. carbolic acid solutions or sublimate 1-500, using a nail brush; cleanse the ulcer itself with zinc chloride 1-40. The ulcer may now be painted with pure carbolic acid. Having gotten rid of septic material, cease applying irritants and dress with boric acid (saturated solu-

tion), first applying Lister's oiled silk to protect sore from irritation of lint; change daily. (Tre.)

If cicatricial margin prevents flow of arterial blood, **Radiating Incisions** may be made; if venous return is impeded, use the **Curette**, freely disinfect with the solution of zinc chloride or hydrogen peroxide, and subsequently apply antiseptic dressings. (Den.)

Copper Sulphate:—Useful in ulcers occurring in broken down constitutions; first poultice for several days; after the surface is fairly clean apply lint soaked in a solution (grs. v-x-3i), then bandage from toes to knee. (Al.)

Tr. Aloes:—After cleansing and antiseptics of the ulcerated surface, dry carefully with absorbent cotton; then if the sore is superficial, paint it once with the tincture of aloes; if deep, paint it twice; next a piece of impermeable linen is applied and the leg is wrapped entirely in aseptic gauze and cotton. (T. 98.)

Unna's Dressing:—This is to be used when the skin is diseased, apart from the ulcer. The method is as follows: After prolonged cleansing of the ulcer with soap and hot water, brush it with rough antiseptic gauze, and disinfect it with some antiseptic wash. Next the entire region affected with varicose eczema is coated with a thick layer of Lassar's paste (see Appendix II), and the ulcer itself is dusted with iodoform, aristol or dermatol, and covered with cotton. The entire leg is then painted with Unna's paste, melted and applied with a brush. The parts that are covered with Lassar's paste must also be coated with Unna's paste, which is as follows:

Water,	
Glycerine,	āā 3 iiss.
Gelatine,	
Zinc Oxide,	āā grs. ccc.

The leg is bandaged with tarletan, which has been soaked in hot water. The bandage is drawn tight in order to obtain moderate compression; over this a dry bandage is placed. In from two to six days the discharges will pass through the bandage, which must then be changed. Under this treatment secretions dry up, and the bandages are renewed only once a week. (T. 98.)

Nitrate of Silver:—A valuable stimulant in leg ulcers, and those following burns. When cicatrization has begun, care must be taken not to touch the pink line which surrounds the granulations and skin. (Al.)

Airol:—Useful in ulcers of leg, particularly when complicated with eczema. As a dusting powder it is superior to iodoform. (T. 97.)

Europen:—Same indications as for airol. (T. 97.)

Euphorbium:—1 part to 20 as ointment. (F.)

Hydrastine Hydrochlor.:—Grs. v—xxx— $\frac{3}{4}$ i of cerate, especially on mucous surfaces.

Dermatol:—Checks serous exudation and stimulates granulations; useful as a dessicant.

Iodoform:—Often irritating to varicose ulcers, and those attended with eczema; more useful for venereal than non-specific sores. (Al.)

Chloride of Sodium:—10 parts to 1 of powdered menthol. Mix thoroughly and use as dusting powder after cleansing surface. (T. 98.)

Soziodol:—Similar in action to iodoform, only more effective. (Al.)

Tr. Ferr. Muriat.:—An old remedy for indolent and varicose sores, painted over daily, has been highly praised. (Rd.)

Ung. Basilicon, Ung. Bal. Peru, Ung. Hydrarg. Nit.:—Old standard stimulating applications, still much used. (N.)

Naphthol:—5–10 per cent. ointment. (Sm.)

Creosote:—The following combinations when the discharge is excessive:

Creosoti,	M iv.	
Tr. Galbani,	℥ ii.	
Aquæ,	℥ ii.	(Sn.)

Bovinine:—As a digestive to remove sloughs has been used, and, it is claimed, with some success. (Tre.)

Monochloratic Acid and Trichloratic Acid:—Give satisfactory results when caustic action is required. Healing takes place with little or no cicatrization. (F.)

VARICOSE ULCERS:

Aristol:—10 per cent. ointment is excellent. (Sn.)

Hamamelis:—The cerate, ointment or compress. (Rd.)

Creolin:—Gauze dipped in a 2 per cent. solution and covered with wool compress or gauze kept constantly wet. Sloughs and odor rapidly disappear. (Sj.)

Pyoktanin:—After cleansing with a solution of sodium bicarbonate apply a solution, 5 grains, to water, ℥ij. Apply to entire base and margin after drying; cover with absorbent cotton, then with Martin's elastic bandage. (Sj.)

Europen and Boric Acid:—1 part of former to 1-3 of the latter. (Sj.)

Strapping:—With adhesive plaster. Commence at base of the toes and strap all the way up to about three inches above the ulcer. This method has been successful in the author's hands. The entire foot, except the heel, should be enveloped.

Traumatol:—As dusting powder or ointment employed same as a iodoform, said to have been used with great success. (F.)

Curettage:—The following method is recommended. First wash ulcer thoroughly with soap and water, giving a good scrubbing with stiff nail brush; then curette thoroughly and free the edges from their attachment, check hæmorrhage with compresses soaked in a 2 per cent. solution of carbolic acid; now apply strips of diachylon plaster, and cover with absorbent cotton. If granulations become exuberant, apply caustics. (T. 97.)

Tr. of Aloes:—Applied as already described is useful for ulcers of this type.

Elastic Stockings:—The integrity of the circulation should be restored by mechanical means. For this purpose a properly fitted elastic stocking is invaluable.

Martin's Elastic Bandage:—Is also excellent, but requires care in application. When neither the bandage nor stocking is available, a muslin or flannel roller should be used. (W.)

FOUL, SLOUGHING AND GANGRENOUS ULCERS:

For cleansing and irrigating, the following solutions:

Mercuric Bichlorid., 1-2000-3000.

Potass. Permang., 15-60-grs. Oj.

Carbolic Acid, 1-40.

Hydrogen Peroxide, pure or diluted.

Styron, 1-12.

Trichlorphenol, 1 or 2-100.

Creosote Water, Mi- $\frac{3}{4}$ i or stronger.

Bromium, 1-1000.

Labarraque's Solution.

Sodium Hyposulphite, 1-5-10 parts of water, kept in contact with lint will correct feter and tend to establish healthy reaction. (Al.)

Charcoal:—A number of small flat bags containing charcoal placed on foul surfaces will destroy the fetor. (F.)

Peat:—In the form of fine powder, dusted on, has a good effect and tends to promote healthy granulation. It should be frequently repeated. (F.)

Bismuth Sub-Iodide:—May be used for packing ulcer when it is impossible to apply dressing; after which it may be sealed up. (Alz.)

Creosote:—Undiluted, may be brushed on foul and indolent ulcers. (Al.)

Xeroform:—In cases where cauterization has been applied it is most excellent dusted over surface. (F.)

TUBERCULAR ULCERS:

Local measures are of the utmost importance, the aim of treatment being the complete removal of the disease.

Antipthisine:—Applied to ulcers of this variety causes them to become clean and to show a tendency to heal.

Menthol and Iodoform:—Equal parts; better than iodoform alone. (Al.)

Calcium Phosphate:—1-100 in solution, with little free phosphoric acid, has succeeded, it is said, when other remedies have failed. (Al.)

Mercury:—Calomel ointment and blackwash are recommended for lesions of the tuberculas syphilitic variety. (R.)

Curette and Cautery:—These constitute effective measures. They should be followed by iodoform dressings. (Tre.)

Excision:—This may be preferred, especially when followed by skin grafting. (Tre.)

SCROFULOUS ULCERS:

Treatment in the main similar to tubercular, with exception of antiphthisine.

Phosphoric Acid:—50 grains to 1 ounce of distilled water; lint dipped in the solution and renewed three or four times a day has been employed. (Al.)

Acid Nitrate of Mercury:—More or less dilute solution. (Al.)

PHAGEDÆNIC ULCERS See Phagedena:

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Unna's Method:—For an iodoform dressing and for stiffening an ordinary bandage in order to give support and compression:

1. Wash skin with soap and water.
2. Apply an antiseptic lotion.
3. Powder with iodoform.
4. Take a double-headed bandage and apply, commencing at the middle of the sore. The bandage should be porous and over it is rubbed a mixture of gelatine and glycerine, 10 parts of gelatine, 40 of glycerine, and 40 of water, with some oxide of zinc. This is melted and rubbed into the bandage; before it is set another bandage is dipped in hot water and applied. The bandages are renewed according to the amount of discharge, usually at first every day. They can be easily removed by the patient placing the leg in a pail of hot water. A bandage so applied gives good support. (Tre.)

Ichthyol:—25 per cent. aqueous solution is recommended in ulcers of all varieties. (Tre.)

Alum:—In solution in relaxed and abundantly secreting sores. (R.)

Thiol:—Antiseptic and protective, 1 drachm to

vaseline 1 ounce, or a powder thiol sec., 1 drachm, zinc. oxide, 2 drachms starch, 1 ounce, talc 2 ounces. (Al.)

Tanniform:—10 per cent. ointment or powder with starch same strength.

Tumenol.:—5-10 per cent. ointment in slight superficial ulceration.

Potass. Sozoiodolate:—An odorless and non-poisonous substitute for iodoform. Use pure or diluted with from three to ten times its weight of starch or talc. (F.)

Terebene:—Used as a substitute for carbolic acid in antiseptic dressings.

Alum:—Useful dessicant for suppressing fungoid granulations and to stimulate indolent and sanious ulcerations. It acts as an escharotic on tissues in process of growth. (N.)

Hot and Cold Effusions:—During the process of healing, pouring hot water on the limb followed by cold is beneficial for restoring and equalizing the circulation in ulcers of the extremities.

Massage:—Rubbing gently toward the body is often of service during the process of resolution, especially when there is much œdema.

SYPHILITIC ULCERS See Syphilis.

URÆMIC POISONING.

The Vapor or Hot Air Bath, or the Hot Pack, should be employed at once; the latter is very efficient and less enervating. (Ty.)

Pilocarpine:—Subcutaneously administered in conjunction with the hot pack, in doses of $\frac{1}{3}$ of a grain

of the muriate or less, is one of the most important remedies; if diaphoresis does not set in, repeat in half an hour. (Ty.)

Jaborandi:—An infusion of the leaves ʒi , to water ʒiv . When cool strain, and inject into the rectum; acts almost as well as pilocarpine.

Atropine:— $\frac{1}{60}$ of a gr., hypodermically; indicated if there is pulmonary œdema.

Chloral Hydrate:—1 drachm by the rectum may be used with good effect if convulsions persist; 15–30 grains may be given to a child.

Morphia:—Hypodermically, in large doses; $\frac{1}{2}$ gr. was used by Prof. Loomis in uræmic convulsions complicating acute nephritis. Caution, however, should be observed in its use. (Ty.)

Digitalis:—A poultice of leaves to the abdomen and lumbar region may be used (B.), $\frac{1}{4}$ gr. of the extract, hypodermically. (R.)

Dry or Wet Cups:—Applied over lumbar region may prove of service.

Intra-Muscular Injections:—These have proved effective and in the last stages of uræmia and eclampsia are really powerful agents. M. Dumarest, who appears first to have recommended the measure, sums up his experience in the following: “These injections exert the best influence on the toxic symptoms due to changes in the kidney and even on simple albuminuria. Pulmonary œdema and anasarca are not contra-indications. The salt water probably acts as a tonic and antitoxic. (T. 98.)

Hypodermic Injections of Salt Water:—Solutions of 1 per cent., may be given in extreme cases.

High Enemata:—Moderately cool, have been advised to promote diuresis; also at blood heat with 1 per cent. salt added. (T. 96.)

Inhalations of **Amyl Nitrate**, **Oxygen** and **Nitrogen** combined for oppression in breathing; hypodermics of **Strychnine** or **Ether**, especially the former, are measures to be considered when collapse is imminent.

URETHRITIS IN FEMALES.

(See also **Gonorrhœa**.)

Tannic Acid:—Bougies, covered with this agent, according to Dr. Hicks, constitute one of the most efficient means of treatment in the specific form.

Resorcin:—Injections of 3 per cent. solution are employed. After the discharge has diminished, which is usually the case in three or four days, increase the number of injections to three or four a day, and one at night. Continue injections after cessation of the discharge for some time.

Zinc. Sulph.:—Crayon of the sulphate inserted into the urethra has been used successfully in chronic forms. (Al.)

Lavage of Urethra, with solutions of **Corrosive Sublimate**, 1–2000, or **Potass. Permang.**, 1–250, have proved of service. (Sj.)

URINE, RETENTION OF.

Catheterize patient at once. If not successful try **Hot Sitz Baths**, **Hot Fomentations** to perineum and hypogastrium, or **Hot Enemata**. (Rd.) Allow patient to hear water run from faucet.

Pressure Over Supra-Pubic Region:—If the retention is the result of spinal disease the urine may

sometimes be expelled by pressure over the suprapubic region without the use of the catheter.

Aspiration:—When all other means fail use aspirator or trocar and canula. (Cl.)

URTICARIA.

In addition to the following, the reader is referred to Pruritus:

Cold Water:—Often relieves alone or with alcohol.

Chloroform:— ʒi , with alcohol or cold cream ʒi .

Camphor:—McCall Anderson's powder. (See Erythema.)

Lime Water, Laurel Water, and Glycerine:—Equal parts.

Chloral:— ʒiij , aquæ laurocerasi ʒviii .

Menthol:—About 20 grains to olive oil 1 ounce, or an ethereal solution, 1 drachm to the ounce.

Carbolic Acid:— ʒiii , glycerine ʒi , water Oj .

Benzoic Acid:—Saturated solution, or grs. x, water, ʒi .

Alumol:—10 per cent. solution. (F.)

The following pomade is recommended by Brocq:

Acid. Carbolic,	grs. xv.
Ess. Menth. Pip.,	M. xv.
Zinc. Oxidi,	ʒiij .
Lanolini,	ʒss .
Vaselini,	ad. ʒij .

Before applying the above, use lotions of chloral.

Bathing the parts with dilutions of Extract of Witch Hazel or Lemon Juice, solutions of Soda Bicarbonate, or Salts of Potassium, or Ammonia, occasionally affords relief.

Change of climate in obstinate cases is often beneficial.

UVULA—RELAXED OR ELONGATED.

Astringent gargles of **Alum** or **Tannin**, and applications of **Nitrate of Silver** will prove useful palliatives.

Some claim that **Excision** is the sole method by which a permanent cure can be effected. Care should be observed to excise only the mucous membrane. (Iv., Ba.)

VAGINISMUS.

As this is a symptom of various diseased conditions affecting the genital track and surrounding parts, an examination should be made in order to locate the cause and thereby determine appropriate treatment.

The morbid conditions which will give rise to this affection are: Urethral caruncle, inflammation and fissures of hymen, imperforate hymen, vaginal inflammations and erosions, vulvar inflammation, erosion and fissures, rectal fissures, cervical lacerations, displacements, ovarian prolapsus, peri-uterine inflammation and exudations. (K. C.) The local treatment, therefore, covers a wide range.

Applications of **Belladonna** ointment, and **Warm Sitz Baths** are sometimes useful. The following suppository, for its astringent and sedative effects, is recommended to allay irritation:

Ext. <i>Krameriaë</i> ,	grs. iss.
Morph. Hydrochlorat.,	gr. $\frac{1}{3}$.
Ol. <i>Theobromæ</i> ,	ʒi. (T. 98.)

Cocaine:—In 2–5 per cent. solutions, is useful for

application in hyperæsthetic conditions after local inflammations have been subdued.

Faradism:—The application of the secondary faradic current of tension with the long fine wire will sometimes do good. (K. C.)

Galvanism:—A mild current, with the positive electrode in the vagina and the negative over the hypogastrium, has been administered with good effect. (Sw.)

Dilatation:—Slow and cautious dilatation, commencing with glass plugs sufficiently small to be introduced without pain, constitutes a useful method of treatment; if the stretching go too far it will cause pain and relapse. (W. C.)

VAGINITIS.

(See also Leucorrhœa and Gonorrhœa.)

Borax:—Copious douches of a saturated solution with rest and mild cathartics will cure most simple acute cases. (K. C.)

Thiol:—Tampons saturated with a 10–20 per cent. solution in glycerine placed in vagina have been used with success.

Marshmallow:—Injections of the decoction are used in cases of mild irritation. (Al.)

Formal:—Injections of a tablespoonful of a 10 per cent. solution to 1 quart of water. (T. 96.)

Ammon. Chloride:—A solution of 3 drachms to the pint, used as an injection, has been recommended by Dr. Emmett, and for saturating tampons made of strips of lint saturated with the solution and allowing it to remain *in situ* for twenty-four hours.

Nitrate of Silver—In chronic forms wash out the vagina with soap and water and paint through a speculum the entire surface with a nitrate of silver solution 1-10-20 or full strength; then insert a piece of sterilized gauze. This the patient should remove the next day and employ, later, a douche of warm saturated solution of borax; afterwards repeat the application of nitrate of silver. This may be done daily or every other day. (K. C.)

Tannin:—The glycerite is very effective in chronic forms in children. (Al.)

Lysol:— $\frac{1}{2}$ -1 per cent. solutions as douches followed by non-irritating antiseptic powders, such as bismuth, boro-phenate, are recommended for senile vaginitis. (Gld.)

VARICELLA.

Bathe the patient daily in **Carbolized Water** and keep the skin clean. Apply inunctions of **Vaseline**, **Camphorated Oil** or thin **Starch** to relieve the itching. (Rd.)

Caution must be exercised to prevent any injury to the eruption on the face. If there is much inflammation about the base of the eruption points, apply lint saturated with a solution of **Calendula**, **Hydrastis** or **Arnica**. (Gn.)

Zinc or 2 per cent. **Ichthyol Ointment**, may be applied to the crusts on the face. (An.)

VARICOCELE.

Cold Douches:—Applied to scrotum and perineum,

containing 10 per cent. of **Tannin**, are useful palliative measures, together with the suspensory bandage. (T. 96.)

Hamamelis:—Forms a useful lotion when used in conjunction with **Cold Water** sponging.

Ergotine:—The hypodermic injection of this drug is said to be effective. About 2 grains of the extract is administered for a dose. Bartholow, who commends the procedure, says: "The needle is inserted so that its point will rest among the dilated veins; great care must be exercised, however, not to puncture them. Very severe pain follows and possibly faintness, but these effects subside in a few hours unless considerable swelling ensues, which is quite usual. A single injection may cure a very extensive varicocele; more than two are rarely necessary." This procedure is looked upon with disfavor by other authorities.

Operation:—Comparatively few cases will require surgical interference; a well adjusted **Suspensory** worn when in the erect posture will be all that is usually necessary. (W.) But when palliative measures fail, an operation is demanded for radical cure. There are two methods generally employed, subcutaneous ligation (Keyes), and ligation by the open method; the latter is the better. (Cl.)

VARICOSE VEINS.

Hamamelis:—Applied as a lotion on compresses covered with oiled silk, held in position by a well applied bandage, is often effective. Use 1 part of the tincture to 6 parts of water. (Rd.)

Moderate Compression:—Accurately fitting bandages or elastic stockings applied so as to afford that support to the blood which the valves can no longer give, and to prevent increased distension. The pressure should be very gentle and uniform, and applied in the morning, before the patient puts his feet on the floor, and maintained until he retires to bed. Should only a small portion of a vein be enlarged, a piece of strapping plaster may afford the requisite support. Prolonged exercise or standing should be avoided. After taking moderate exercise, the limb should be raised, and maintained in a horizontal posture. Standing is more unfavorable than walking. The leg should be well washed and rubbed quite dry every morning (Rd.)

Perchloride of Iron:—1 part to 3 of water; take strips of folded cotton wet with the solution and apply over enlarged vein; cover with oiled silk and apply bandage and renew daily. Many cases are said to be affected favorably. (Bt.)

Chloride of Barium:—Prof. Robert, of Dorprat, recommends the use of barium applied in the form of an ointment to dilated cutaneous veins in the proportion of 1 drachm to lanolin 1 ounce. The ointment is to be rubbed on the affected part three times a day. (Sm.)

Intravenous injections to produce coagula are dangerous, though they have been practiced with success, they are generally condemned. The use of Vienna paste and similar caustics is obsolete. The only method of radical cure is by **Subcutaneous Ligation**.

VARIOLA.

There are three important indications for external

treatment: Exclusion of air from surface of the skin, keeping the parts permanently moist to prevent hardening of the scabs, and lessening of local irritation.

Vaccination:—Is advisable as soon as possible in order to change the disease, if possible, to varioloid. (Bt.)

Exclusion of Light:—There is a prevailing idea that light should be excluded from the face to prevent pitting, though there are some doubts as to the correctness of this view; it is, however, an expedient recommended by many writers, especially the older ones. Masks may be worn for this purpose.

Boric Acid:—Applications of a solution, 1 drachm to the pint of water, by means of saturated compresses covered with oiled silk and frequently changed, is, together, with the **Exclusion of Sunlight**, a method much practiced. A solution of 1 drachm to 1½ ounces of glycerine applied to the face and pharynx by means of a brush is also employed. (T. C., Vol. XIII.)

Carbolic Acid:—This remedy is mentioned by most writers and is used in various strengths. It may be applied to the face dissolved in olive oil.

In Germany the following paste is much used :

Carbolic Acid,	4 to 10 parts.
Olive Oil,	40 parts.
Prepared Chalk,	60 parts.

Spread on linen and apply to the parts where the eruption is the most severe; change every twelve hours. (T. C., Vol. XIII.)

The following is said to relieve the itching at once :

Carbolic Acid (Crystals),	1 part.
Camphor,	3 parts.
Vaseline,	3-5 parts. (F.)

Flexible Collodion:—If applied to the pustules

early will have a good effect and protect the face from the hands. (F.) If applied late it will do injury by causing the pus to burrow. At the London Smallpox Hospital, Mr. Marson's treatment was to wait until the pustules had burst and then apply **Olive Oil** or **Glycerine** and **Rose Water**, 1-3. He also recommended **Cold Cream**, **Zinc Oxide Ointment**, or **Carron Oil**. (T. C., Vol. XIII.)

Hydrarg. Bichlorid.:—Compresses wet with a solution of grs. ii-iv, water $\bar{z}$ vi. Or,

Hydrarg. Bichlorid.,	
Acid. Citric.,	āā gr. xv.
Alcohol., (90 per cent.),	M lxxx.
Ether.,	q. s. ad. $\bar{z}$ iss.

Spray the face for a minute three or four times a day until dessication takes place; protect the eyes during the application. (T. C., Vol. xiii.)

Cold Compresses:—A light mask of lint thoroughly soaked in a mixture of ice water and glycerine $\bar{z}$ i- $\bar{z}$ i, and covered with oiled silk is preferred by Dr. J. W. Moore. It is also recommended for the relief of pain and swelling.

Salicylic Acid:—A paste made with 3 parts of the acid, 30 of starch, and 70 of glycerine, applied to the face by means of a mask; also to other parts where the eruption is marked.

Ihle's Paste:—A mixture of resorcin 10 grains, with 2 drachms each of powdered starch, oxide of zinc, lanolin and vaseline, is suitable for some cases. (T. C., Vol. XIII.)

Antiseptic and Astringent Dusting Powders:—In the earlier stages of the eruption will possibly relieve the heat and irritation. For this purpose the following may be mentioned: **Boric Acid**, **Subgallate of Bismuth**, or,

Acid. Carbolici,	3 ss.
Zinc. Oxidi,	3 i.
Pulv. Lycopodii,	3 i.
(T. C., Vol. xiii.)	

Aristol:—15 or 20 parts with 100 of vaseline, or 15 parts with 100 of talc.

Labarraque's Solution:—1 per cent. (L. T.)

Cold Cream and Flour:—Made into a thick paste. (Rd.)

Bismuth of Zinc Oxide:—Dusted on after the application of glycerine or olive oil. (Bt.)

Iodoform:—3i, collodion 3i; paint on pustules frequently for hastening the drying and preventing the extension of pustulation. (T. 98)

Linseed Meal Poultices:—Sprinkled with Iodoform can best accomplish early separation of the crusts whether on the face, scalp or elsewhere. A mask of the poultice may be made for the face, spreading a thin layer on lint and applying a little vaseline on which iodoform has been sprinkled; change every two hours. (T. C., Vol. XIII.)

Sponging:—This is both useful and agreeable and should be used in most cases. Warm water with a little prepared carbolic acid may be employed. (Rd.)

Hot Baths:—May be used when it is desired to hasten the appearance of the eruption. (T. C., Vol. XIII.)

The **Prolonged Warm Bath** is recommended by Skoda, Hebra and others, for desperate cases. The patient may be kept in the bath for seven hours daily. Great relief has followed this procedure in what appeared to be hopeless cases.

Cold Baths:—Are indicated for hyperpyrexia. (F.)

Gloves:—May be worn in order to prevent injury

to the face by scratching, especially in sleep. Children may have the hands loosely bound. (L. T.)

The mouth should be frequently and carefully cleansed.

Many other local remedial measures have been suggested, but the above are those which appear to have met with more general approval. Finsen has revived the mediæval treatment of red light, the briefest exposure to daylight being regarded as liable to produce suppuration. Exclusion of chemical rays must be absolute, even the curtains being red. Packing for an hour in blankets saturated in $1\frac{1}{2}$ pints of warmed, not boiled, milk have, it is claimed, been successful in arresting the progress of the disease.

Ventilation:—Is a matter of the greatest importance. The exit of the contaminated air and the entrance of fresh should be secured. Some observers advocate the use of tents, or opening the windows and protecting the patient with extra blankets and shielding from draughts.

VOMITING OF PREGNANCY.

Avoid lying in bed until after breakfast and exercise care in brushing the teeth, as in some cases this produces vomiting.

Vesication:—Over the 4th and 5th dorsal vertebræ is said to have given brilliant results, one application being sufficient. (T. 96.)

Ether or Chloroform Spray against the epigastrium; **Collodion** painted over epigastrium; **Mechanical Support** of uterus by pessaries or cotton; changing cotton daily; irrigation with a solution of

Potassium Bromide, grs. xx–xl–ʒi; the **Recumbent Posture** with the head lower than the body (Bt.), and cold to the spine by means of ice bags, are all measures which may be given a trial. (Rd.)

Ichthyol:—Applied on tampons has, it is claimed, cured obstinate cases. (T. 98.)

Slight Dilatation of the Os:—This procedure performed with great care is frequently attended with benefit. The vagina should be first douched with a sublimate solution of 1–5000, and the parts rendered anæsthetic with cocaine; the finger should then be gently introduced and moved around the cervix with caution. (G. T.)

Electricity:—Voltaism, with feeble intensity and long duration, applied to the right pneumogastric, the positive electrode being placed between the clavicular insertion of the sterno-cleido-mastoid muscle and the negative at the umbilicus. Each séance should continue from fifteen to thirty minutes. (T. 96.)

VULVITIS.

Modern treatment is exceedingly simple, consisting in absolute **Cleanliness** and **Antisepsis**. In young children the best plan is to have them thoroughly bathed, and in older girls the vagina and vulva should be cleansed as though a plastic operation was about to be performed. No special treatment of the urethra is required. Douches for very young children are best applied by means of a soft rubber catheter. Whilst administering, the antiseptic fluid may be brought into more thorough contact with the interstices of the parts by occasionally closing the

vaginal orifice. After washing and irrigating, the labia should be kept separated by a piece of lint saturated with the antiseptic fluid.

In simple varieties of the disease, strong injections are contra-indicated. The only treatment required will be that of frequent bathing with **Sterilized Water** and **Boric Acid** solutions and dusting with bland powders such as boric acid. (H. A. H.)

Potass. Permang.:—An effective douche in the following strengths: 1–2000 for use at first; afterwards gradually increase to 1–1000 or even stronger. (H. A. H.)

Hydrarg. Bichlorid.:—This agent is recommended in various solutions, viz: 1–4000–5000, or even 10,000. (W. A. E.) For frequent use as an injection, 1–2000–5000, and for occasional application in the diphtheritic variety solutions of from 1–300–500 have been recommended by Jacobi.

The following other solutions constitute useful antiseptic douches:

Carbolic Acid, 1–100.

Boric and Salicylic Acid, (10 grains of the former and 5 grains of the latter to the ounce), **Nitrate of Silver**, 1–3000, or even 5000. (W. A. E.)

Lysol, one-half to one per cent. followed by bland powders. (Gld.)

For the disease appearing after scarlet fever and measles:

Zinc Sulpho-Carbolate, 1–2–100.

Aluminum Aceto-Tartrate, 1–5–100.

These solutions are suitable for both irrigation and application by saturating lint and laying it over the part. They may be used in very young children. (Jac.)

Other injections useful for children are the following:

Carbolic Acid, 1–200.

Alum, ʒj–Oj. (Sm.)

Nitrate of Silver:—In the catarrhal variety this relieves the burning and itching. It may be applied as follows: First anæsthetize the part with a 10 per cent. solution of cocaine. Then apply the silver solution, 20–60 grains to the ounce, and cover with a layer of vaseline or with a flaxseed poultice. A single application will usually suffice; if necessary, it may be repeated in 3 or 4 days. (H.)

Iodoform:—Equal parts with bismuth acts well when the discharge is purulent. In some conditions an ointment may be preferred, in which case a drachm to the ounce may be used. When pruritus is a prominent symptom, cocaine may be combined as follows:

Iodoformi,	grs. xv–xl.	
Cocainæ Hydrochlorat.,	ʒss.	
Vasellini,	ʒi.	(H.)

Lead Acetate:—Cold compresses wet in lead lotion are usually all that is necessary in eczematous varieties.

When the discharge is profuse the following:

Acid. Boric.,	ʒi.	
Plumb. Acetat.,	grs. x.	
Bismuth. Carbonat.,	ʒij.	
Cremoris Alb.,	ad. ʒi.	(Alb.)

For simple dermal variety:

Calamin. Prep.,	ʒss.	
Zinc. Oxid.,	ʒii.	
Glycerini,	ʒi.	
Aq. Rosæ,	ʒij.	(Alb.)

Lead and Opium Wash:—Hare recommends the following, applied with compresses when nitrate of silver fails:

Tr. Opii,	
Liq. Plumb. Subacetat.,	āā 3i.
Aq. Destill.,	3iv.

When an **Astringent** is desired for injection and irrigation, the following can be used with good effect:

Tannin, 5-100.

Zinc Sulphate, 1-50. (Hen.)

Ice Bags:—When pus has formed hot fomentations and antiseptic irrigation followed by incision are the chief indications of treatment.

When the disease takes on an apthous type the following:

Acid. Salicylici,	grs. x-3 ss.
Bismuthi Subnit.,	3ij.
Glycerini,	3i. (H.)

Carbolized Oil:—This is sometimes of service, applied in the strength of 1-60. (Strr.)

The following bland, non-irritating, antiseptic powders are useful after antisepsis: **Markosol** (Gld.) or **Boric Acid** combined with **Zinc** or **Starch**, of which the following is an example:

Pulv. Zinc. Ox.	
Acid. Boraci,	āā 3ss.
Pulv. Amyli,	3j. (Strr.)

Sodium Sulphite:—When due to diabetic urine, Hare recommends a solution of 3ss-Oj in conjunction with separation of the surfaces by means of pledgets of lint meditated with diachylon ointment.

Ointments are useful to protect the parts from the irritating vaginal discharges. **Cold Cream**, **Zinc**

Oxide Ointment, **Benzoated Lard** 1 drachm, with zinc oxide ointment 1 ounce, may serve this purpose. The same may also be used to relieve the heat and dryness of the part. (H.)

In the *Gonorrhœal Variety*, **Rest** and **Elevation** of the parts are absolutely essential. The affected region must be kept clean and dry. Washing every two hours with a strong solution of **Soda Bicarbonate**, which should be applied gently, the vaginal orifice being separated by the thumb and finger. After irrigation, the parts should be thoroughly dried and all excess fluid removed by absorbent compresses or old, clean linen or similar material. Dusting powders, such as those previously mentioned, can now be used. In the severer forms **Hot Baths** (not sitz baths), followed by **Lead** and **Opium** wash or painting the entire vulva with a solution of **Nitrate of Silver** (grs. xl-1 ounce), will usually effect a cure. For the severe burning and throbbing and inflammation, leeches along the groin and perineum will afford relief. (Am.)

In *Chronic Cases* the vagina and the urethral glands are often at fault. For these conditions, **Free Incisions** and the **Curette** followed by packing with **Iodoform Gauze** have been recommended; also excision and the seton; but the former measures are preferable. (Am.)

WARTS.

Local treatment will vary according to variety and locality. Small growths may be removed with a pair of curved scissors, and the base touched with

nitrate of silver. Larger growths call for the **Ligature** or **Galvano-cautery**, Smaller ones, when pedunculated, may also be conveniently removed by the ligature. It is advisable to pare down the wart before ligating. (Pf.)

Hydrarg. Bichlorid.:—Localities which are the seat of the growths should be frequently washed with a bichloride soap and bathed with a solution of 1–2000. This should precede all methods of treatment according to Van Harlingen, who recommends painting the part with a solution in collodion of from 4–8 grains to the ounce.

Chromic Acid:—A saturated solution is preferred by Crocker for application to common warts. The black crust should be removed every few days.

Salicylic Acid:—A saturated solution in alcohol, repeatedly applied, is usually successful for small warts. (Ck.)

The following are also effective:

Acid. Salicylici,	℥ ss.
Ext. Cannabis Ind.,	grs. v.
Collodii,	℥ i.

For seborrhœal warts:

Acid. Salicylici,	grs. x–xx.
Sulphuris Præcip.,	℥ ss.
Pulv. Amyli,	℥ ss.
Ung. Aq. Rosæ,	℥ iv. (Hd.)

Thuja:—Often useful; apply the tincture frequently with a brush. (Rd.)

Caustic Paste:—Viz.:

Sulphuris,	℥ v.
Glycerini,	℥ jss.
Acid. Acetici,	℥ ijss. (Kap.)
Apply twice daily.	

Or,

Pulv. Acid. Arseniosi,	grs. vj.
Ung. Hydrarg.,	
Empl. Hydrarg.,	āā q. s. ad. ℥ii. (Hy.)

Electrolysis:—Is mentioned by Hardaway as the best treatment. Complete destruction of the growth is not necessary, but merely transfixion with the needle.

Caustics:—In addition to those already mentioned, the following are also used:

Potassa, Acid Nitrate of Mercury, Chloride of Zinc, Nitric, Hydrochloric, Acetic, Glacial Acetic, and Carbolic Acids, etc. (Duh.)

APPENDIX I.

MEDICINAL BATHS.

Acid Bath :—

Acidi Nitrici Fortis,	℥ iss.
Acidi Hydrochlorici Fortis,	℥ i.
Aquæ,	C. xxx.

May be employed in pruritus, urticaria and eczema of the papular variety.

Acidi Muriatici,	℥ x.
Aquæ,	C. i.

Acid baths should be prepared in a wooden tub and administered two or three times a week for fifteen or twenty minutes at a time. They have been employed in treating mercurial poisonings in certain hepatic diseases with retention of bile. They have been found to increase the irritation of jaundice and are rarely used at the present time.

Alkaline Bath:—

Sodii Carbonatis,	℥ iv.
Aquæ,	C. xxx.

Or,

Potassii Carbonatis,	℥ iv.
Sodii Carbonatis,	℥ iij.
Sodii Biboratis,	℥ ij.

Add this powder to 30 gallons of water, with half a pound of starch, which has been previously boiled, to make what is known as a clear starch.

An artificial Vichy bath may be prepared by adding 1 part of sodium bicarbonate to 600 parts of water, and an artificial Plombières bath by mixing the following:

Sodium Carbonate,	50 parts.
Sodium Chloride,	2 parts.
Sodium Sulphate,	6 parts.
Sodium Bicarbonate,	2 parts.
Gelatin,	10 parts.
Water,	30,000 parts.

These baths are of utility in chronic vesicular and squamous skin diseases in prurigo, psoriasis, and ichthyosis where a palliative effect is desired. In chorea and functional nervous disorders they will prove of benefit for their sedative properties. Also found beneficial in jaundice where there is much itching. Chronic rheumatism, gout, and urinary lithiasis may be aided by their use.

Aromatic Baths:—Prepared by infusing rosemary, lavender, sage, wormwood or other aromatic herbs. May be used in chlorosis and sometimes in cachectic conditions as cutaneous excitants. The recipe of the official French code is: 500 grams of aromatic spices dissolved in 10 litres of water, adding the solution to 250 litres of water.

Arsenical Bath:—Dissolve 15–45 grains of sodium arsenate and 3 ozs. of sodium carbonate in a bath tub full of water. Thirty baths are said to relieve the articular stiffness and pain in rheumatic arthritis. Gastric trouble may arise or the joint pain increase, but these symptoms will disappear when the sodium bicarbonate is withdrawn.

Another formula is:

Potassii Sulphureti,	℥iv.
Sodii Arseniatis,	grs. xxx–xl.
Aq. Calidæ,	C. xxx.

Borax Bath:—

Sodii Boratis,	℥iv.
Glycerini,	℥iii.
Aq. Calidæ,	C. xxx.

Bromine Bath:—Made by dissolving 20 drops of bromine and 2 ounces of potassium bromide in 30 gallons of water. Advantageous in syphilis and squamous skin diseases.

Carbolic Acid or Creosote Baths:—

Creosoti sen Acidi Carbolicæ,	℥ij.
Glycerini,	℥ij.
Aquæ,	C. xxx.

May be employed in pruritus and certain forms of squamous eczema.

Emollient Baths:—Have been employed with good effect in cold abscess, lymphangitis, phlebitis, acute arthritis and erythematous, scaly and itching skin affections. Prepare a bath by boiling 2 parts of marshmallow, elder, bran or linseed meal in 10 parts of water, adding this decoction to a tub of warm water.

Other emollient baths may be prepared as follows, the proportions being 30 gallons of water to the quantity of medicant stated:

- Bran, 2-6 pounds.
- Linseed, 1 pound.
- Marshmallow, 4 pounds.
- Potato Starch, 1 pound.

Gelatin Bath:—Dissolve 1 pound of gelatin or common glue in boiling water and add 20 gallons of hot water. It is made more effective by adding 1-2 pounds of bran confined in a muslin bag. These baths have been recommended in skin diseases where

nervous excitability is a prominent feature. Gelatin added to sulphuretted baths renders them less disagreeable. The French code directs that 500 grams of powdered gelatin be dissolved in 2 litres of hot water, and added to the bath when required.

Iodine Baths:—

Potassii Iodidi,	℥ vi.
Iodi,	℥ ij.
Aquæ,	℥ xx.

Add this mixture to an ordinary bath.

These baths have been advantageously used in scrofula in children and in syphilis and squamous skin diseases. For the use of children the formula may be modified thus:

Potassii Iodi,	℥ iv.
Iodi,	℥ ij.
Aquæ,	℥ x,

Add to an ordinary bath.

Mercurial Baths:—

Hydrarg. Bichloridi,	℥ v.
Alcoholis,	℥ ij.
Ammonii Chloridi,	℥ i.

This mixture may be added to a bath tub of water.

This bath is used in syphilides, but is contra-indicated when there is much ulceration for fear of absorption. Sublimate baths which have proved useful in infantile syphilis may be prepared by adding 10 grains of the bichloride to each bath. A blanket should be tied around the neck of the child to cover the bath and effectually prevent splashing of the water in its face.

Mercurial Vapor Baths:—A tin case is furnished by instrument makers, containing a small spirit lamp

with a receptacle over the flame, on which 15-30 grains of calomel are placed. Surrounding this there is a saucer-like receptacle which is filled with boiling water. The patient is seated on a common cane-bottomed chair, under which the apparatus is placed. The lamp is then lighted and the patient and chair are completely enveloped in large blankets. In about twenty minutes the mercury and water will be found to have disappeared. It is advisable not to use a towel, as the calomel can be wiped off. The bath may also be given by using a hot air box especially constructed for the purpose. These forms of mercurial baths are almost exclusively used when the administration of mercury in this manner is desired.

Mustard Baths:—Are prepared by dissolving 1-2 parts of mustard meal in 600 of warm water. Keep the patient only a brief time in the bath to prevent too great irritation of the skin.

Used in the algic stage of cholera and serious congestion of the bowels. The mustard foot-bath, according to the French code, is made by dissolving 150 grams of mustard meal in a sufficient quantity of water not above 104° F.

Pine Baths:—Made by adding a decoction of pine tree shoots to water, or by using the oil of forest pine in the proportion of 1 minim of *oleum pini silvestris* to the gallon. These baths are useful in gout and rheumatism, scrofula, skin diseases and paralysis.

Saline Baths:—Dissolve 8-10 parts of rock salt or sea salt in 300 of water. The French code says 5000 grams of sea salt to 300 litres of water.

For sponging use a solution of common salt in the proportion of half a pound to 4 gallons of water.

Sea Baths:—Diminish peripheral circulation and

stimulate respiration of the pure sea air. They are beneficial in scrofulous diathesis, functional nervous disorders and sometimes in mal-assimilation. Tendency to internal hæmorrhage is a contra-indication.

Narcotic Baths:—Boil for an hour 1 part of poppy seeds, belladonna leaves, hyoscyamus leaves, datura leaves or other narcotic leaves in 10 parts of water. Add the decoction to a tub full of warm water. These baths will be found useful in inflammation of the genito-urinary organs, peritonitis, enteritis, external hæmorrhoids, etc.

Sedative Baths:—1 part of some sedative herb, such as valerian, digitalis, or hemlock, in 10 parts of water.

Put the decoction in a tub full of warm water. Useful in neurasthenia, hysteria and certain forms of neuroses. Inhalation of the fumes should be prevented by pinning a sheet around the patient's neck.

Stimulating Baths:—Add alcohol, wine, rum, aromatic alcohol or aromatic vinegar to warm water. Beneficial in stimulating circulation and relieving debility and languor.

Sulphur Baths:—These are stimulating and are useful in cutaneous eruptions, such as herpes, syphilides, scrofulous diseases, scabies, psoriasis, pityriasis, acne, and impetigo, etc., and in articular rheumatism, catarrhs, lead palsy, chlorosis, and anæmia. They are prepared by mixing the following:

Sodium or Calcium Monosulphate,	50 parts.
Sodium Carbonate or Bicarbonate,	50 parts.
Sodium Chloride,	50 parts.
Water,	300,000 parts.

Startin's compound sulphur bath consists of the following:

Sulphur. Præcipit.,	℥ij.
Sodii Hyposulphit.,	℥j.
Acid. Sulphuric, Dilut.,	℥ss.
Aquæ,	Oj.

Add this to the contents of the bath tub.

Another formula :

Potassii Sulphuret.,	℥iv
Aquæ,	C. xxx.

Tar Baths:—So-called tar baths are employed for rubbing the diseased parts with tar and following this treatment with an ordinary warm bath.

Baths are classified according to temperature, as follows :

	Water.	Vapor.	Air.
Cold, ...	33°- 65°		
Cool, ...	65°- 75°		
Temperate, . . .	75°- 85°		
Tepid, ...	85°- 92°	90°-100°	96°-106°.
Warm, ...	92°- 98°	100°-115°	106°-120°.
Hot, ...	98°-112°	115°-140°	120°-180.°

APPENDIX II.

The formulæ of certain compounds, with some exceptions, generally known by the author's name:

Lassar's Paste:—

Amyli,	
Zinci Oxidi,	āā ʒij.
Vaselini,	ʒiv.

Unna's Paste:—

Water,	
Glycerine,	āā ʒiiss.
Gelatine,	
Zinc Oxide,	āā grs. ccc.

Vlemingckx's Solution:—

Calcis Vivæ,	ʒiv.
Sulphur. Sublimat.,	ʒi.
Aq. Destill.,	ʒx.

Boil together with constant stirring until the mixture measures 6 fluid ounces, then filter.

Hebra's Diachylon Ointment:—

Ol. Olivæ,	ʒxv.
Lithargyri,	ʒiii.

Boil together to a good consistency and add oil of lavender, 2 drachms.

Lugol's Solution (Compound Solution of Iodine):—

Iodine,	5 parts.
Potassium Iodide,	10 parts.
Distilled Water,	85 parts.

Dobell's Solution:—

Sodii Biboratis,	
Sodii Bicarbonatis,	āā ʒi.
Glycerini,	ʒii.
Acid. Carbolici Liquifacti (90 per cent.),	M XV.
Aquæ,	qs. ad. ʒ viii.

Thiersch's Solution (Liq. Boro-Salicylicus):—

Acid. Salicylici,	grs. xv.
Acid. Borici,	ʒiss.
Aquæ,	q. s. ad. ʒ xvi.

Seiler's Antiseptic Tablets:—

Sodium Chloride,	5 grains.
Sodium Borate,	5 grains.
Eucalyptol,	$\frac{7}{48}$ grain.
Thymol,	$\frac{7}{48}$ grain.
Oil of Gaultheria,	$\frac{7}{96}$ grain.
Sodium Bicarbonate,	5 grains.
Sodium Benzoate,	$\frac{7}{24}$ grain.
Sodium Salicylate,	$\frac{7}{24}$ grain.
Menthol,	$\frac{7}{96}$ grain.

A tablet containing the above is dissolved in 2 tablespoonfuls of water, and the solution used with the atomizer for cleansing the mucous surfaces of the nose and throat.

Labarraque's Solution:—This is an aqueous solution of several chlorine compounds of sodium, chiefly NaClO and NaCl and containing at least 2.6 by weight of available chlorine.

Wilkinson's Ointment:—

Sulphuris,	
Ol. Cadini,	āā ʒ ss.
Sapo. Viridis,	
Adipis,	āā ʒi.
Cretæ Preparatæ,	ʒiiss.

Burow's Liquor or Solution:—

Lead Acetate,	i part.
Alum Acetate,	5 parts.
Distilled Water,	100 parts.

Churchill's Tincture of Iodine:—

Iodi,	℥ iiss.
Potassii Iodidi,	℥ ss.
Aquæ,	℥ iv.
Alcoholis,	q. s. ad. ℥ xvi.

Churchill's Iodine Caustic:—

Iodi,	℥ ii.
Potassii Iodidi,	℥ iv.
Aquæ,	℥ i.

Calamine Lotion:—

Pulv. Calaminæ,	℥ ii.
Zinci Oxidi,	℥ ss.
Glycerini,	M. xv.
Aq. Rosæ,	℥ i.

Billroth's Transfusion Fluid:—

Sodii Chloridi,	℥ i.
Sodii Carbonatis,	grs. xx.
Sodii Phosphatis,	grs. iij.
Ammonizæ Carbonatis,	grs. xx.
Alcoholis,	M. clx.
Aq. Destill.,	q. s. ℥ xvi.

Dissolve the sodium salts in the distilled water, sterilize the solution by heat, then add the ammonium carbonate and alcohol, cork the bottle well and allow it to cool.

Hayem's Artificial Serum:—

Sodium Hydrate,	grs. xvss.
Sodium Chloride,	℥ iv.
Sodium Sulphate,	grs. xxxix.
Boiled Water,	℥ iii.

Inject 1-4 pints at a temperature of 100.°

Normal Saline Solution:—Clinical experience has demonstrated that a solution containing the normal proportion of sodium chloride answers well in every way for the purpose of transfusion. The proportion of the chloride to sterilized water is 0.6 per cent.

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